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**THE US ARMY YUMA PROVING GROUND, ARIZONA  
33-YEAR CLIMATE CALENDAR  
AND  
TABLES ON ASSOCIATED WEATHER ELEMENTS  
1954 - 1986**

**American Desert Country**

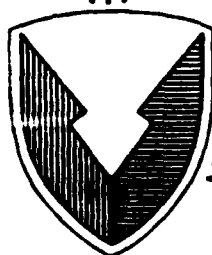
**June 1988**

by

**James C. Devine**

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4. PERFORMING ORGANIZATION REPORT NUMBER(S) <b>ASL-TR-0226</b>			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
6a. NAME OF PERFORMING ORGANIZATION <b>US Army Atmospheric Sciences Laboratory</b>		6b. OFFICE SYMBOL (If applicable) <b>SLCAS-AR-A</b>	7a. NAME OF MONITORING ORGANIZATION		
6c. ADDRESS (City, State, and ZIP Code) <b>White Sands Missile Range, NM 88002-5501</b>			7b. ADDRESS (City, State, and ZIP Code)		
8a. NAME OF FUNDING / SPONSORING ORGANIZATION <b>US Army Laboratory Command</b>		8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER		
8c. ADDRESS (City, State, and ZIP Code) <b>Adelphi, MD 20738-1145</b>			10. SOURCE OF FUNDING NUMBERS		
PROGRAM ELEMENT NO.		PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.	
61102A		1L161102B53	1003-12	88521343	
11. TITLE (Include Security Classification) <b>The US Army Yuma Proving Ground, Arizona 33-Year Climate Calendar and Tables on Associated Weather Elements 1954 - 1986</b>					
12. PERSONAL AUTHOR(S) <b>JAMES C. DEVINE</b>					
13a. TYPE OF REPORT <b>Final</b>		13b. TIME COVERED <b>FROM 1954 TO 1986</b>	14. DATE OF REPORT (Year, Month, Day) <b>1988 June</b>		15. PAGE COUNT <b>129</b>
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP			
04	02		Weather , Degree Days , Terrain , Wind ,		
04	01		Precipitation , Trafficability , Climate , Relative Humidity ,		
			Thunderstorms , Visibility , Rain , Atmospheric Pressure		
19. ABSTRACT (Continue on reverse if necessary and identify by block number)					
<p>This report contains an extremely well documented history of pure desert conditions over a 33-yr period (1954 through 1986). The desert region is in southwestern Arizona. In many cases this climate is similar to the Mideast regions. In addition to the general discussion of the terrain, climate, visibility, and other features of interest, extensive detail and analyses of most weather elements during this period are presented in the eight appendices. Of interest to some is the fact that this period covers three sunspot cycle periods of 11 yr each and one cycle of the 22-yr variety. The data is presented here in a manner that interested personnel may develop their own comparative graphs to determine what effect, if any, these cycles have on varied weather elements in desert country. <i>Keywords:</i></p>					
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION <b>UNCLASSIFIED</b>		
22a. NAME OF RESPONSIBLE INDIVIDUAL <b>MARIE RICHARDSON</b>			22b. TELEPHONE (Include Area Code) <b>(505) 678-2335</b>		22c. OFFICE SYMBOL <b>SLCAS-MT-P</b>

18. (Cont)

Desert	Dust
Sunrise - Sunset Tables	Solar Radiation
Climate Calendar	Sunspots
Soil Temperature	

19. (Cont)

The appendices specially treat precipitation, temperature, other general weather elements and their effects such as the monthly maximum gusty surface winds, thunderstorms, dust, relative humidity, soil temperature, station atmospheric pressure, degree days, solar radiation, sunrise and sunset tables, and records and averages that may be of interest. The climate calendar provides the average and record high and low daily temperatures and year of occurrence: monthly average maximum and minimum temperatures; average relative humidity; average wind-speed in knots; prevailing monthly wind direction; average monthly and maximum 24-hr and monthly precipitation values; average sky cover; and the monthly average number of days that were clear, partly cloudy, or cloudy.

#### ACKNOWLEDGEMENT

The author thanks Mr. J. P. Vaughn, Jr., whose publication in 1966 of The Yuma Climate Calendar, TR-ECOM-6016, US Army Electronics Command, US Army Electronics R&D Activity, Fort Huachuca, Arizona, provided some of the climatology and terrain information used in this report.

Special thanks must go to all of the individuals who served with the US Army Atmospheric Sciences Laboratory's Yuma Meteorological Team during 1954 through 1986. Their dedication to duty and combined efforts in collecting and recording the meteorological observations during this time made this report possible.

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## 1. INTRODUCTION

The weather data for this climate report were collected at the Central Meteorological Observatory (CMO) of the US Army Yuma Proving Ground (YPG), Arizona, 4 mi southwest of the main post. The geographical coordinates of the CMO are 32°50'N and 114°24'W. The station elevation is 324 ft above sea level. Figure 1 shows the general Yuma region. Because of its location, this region is a prime source for information on desert conditions.

The climatological data cover 1954 through 1986, a data base of 33 yr. Certain parameters were available only for shorter time frames; therefore, all tables show the applicable period of record.

## 2. 11- AND 22-YR SUNSPOT CYCLES

This climate summary provides a unique look at the weather over a 33-yr period that includes the 11-yr sunspot cycle three times and thus includes the 22-yr solar sunspot cycle. Sunspots are dark areas on the sun produced by intense magnetic fields. The sunspot cycle consists of variations in the frequency and size of these spots as well as position on the sun (not discussed here). The number of sunspots peaks soon after the beginning of the upswing following the minimum then decays slowly to a new minimum over an 11-yr total period. The magnetic polarity of the sunspot group reverses in each successive cycle so that the complete cycle runs for 22 yr. Sunspots were discovered by C. Scheiner and Galileo around 1610. Although there is seldom a time when there is no sunspot activity, between 1650 and 1715 there were very few sunspots seen although qualified observers searched for them. E. W. Maunder first noted this departure from normal as the sunspots returned after 1715. Weatherwise, this period was associated with the "little ice age" in Europe. Carbon 14 in tree rings supports the low solar activity level at that time; however, it cannot be proven that the little ice age was caused by the lack of sunspot activity. Generally, researchers believe that periods of low activity have the greatest terrestrial effects.

Of prime interest for those curious about sunspots and weather, this climate report on the Yuma area covers the period with the maximum sunspot activity ever in the history of sunspot recordkeeping. This occurred in 1957. Figure 2 graphs the monthly mean number of sunspots over the period 1945 through 1986. The 1946-1947 period was the second largest activity period recorded, but data from this period are not available for this report. The inclusion of this chart will permit those so interested to compare various other data in this report with the ups and downs of the sun's activity. The mean values plotted here smooth out the fluctuations that do occur each month of each year, but the general annual trend is presented. The sunspot number listed along the sides of figure 2 is a derived relative number known as the American sunspot number and does not refer to the actual number of spots seen on the sun.

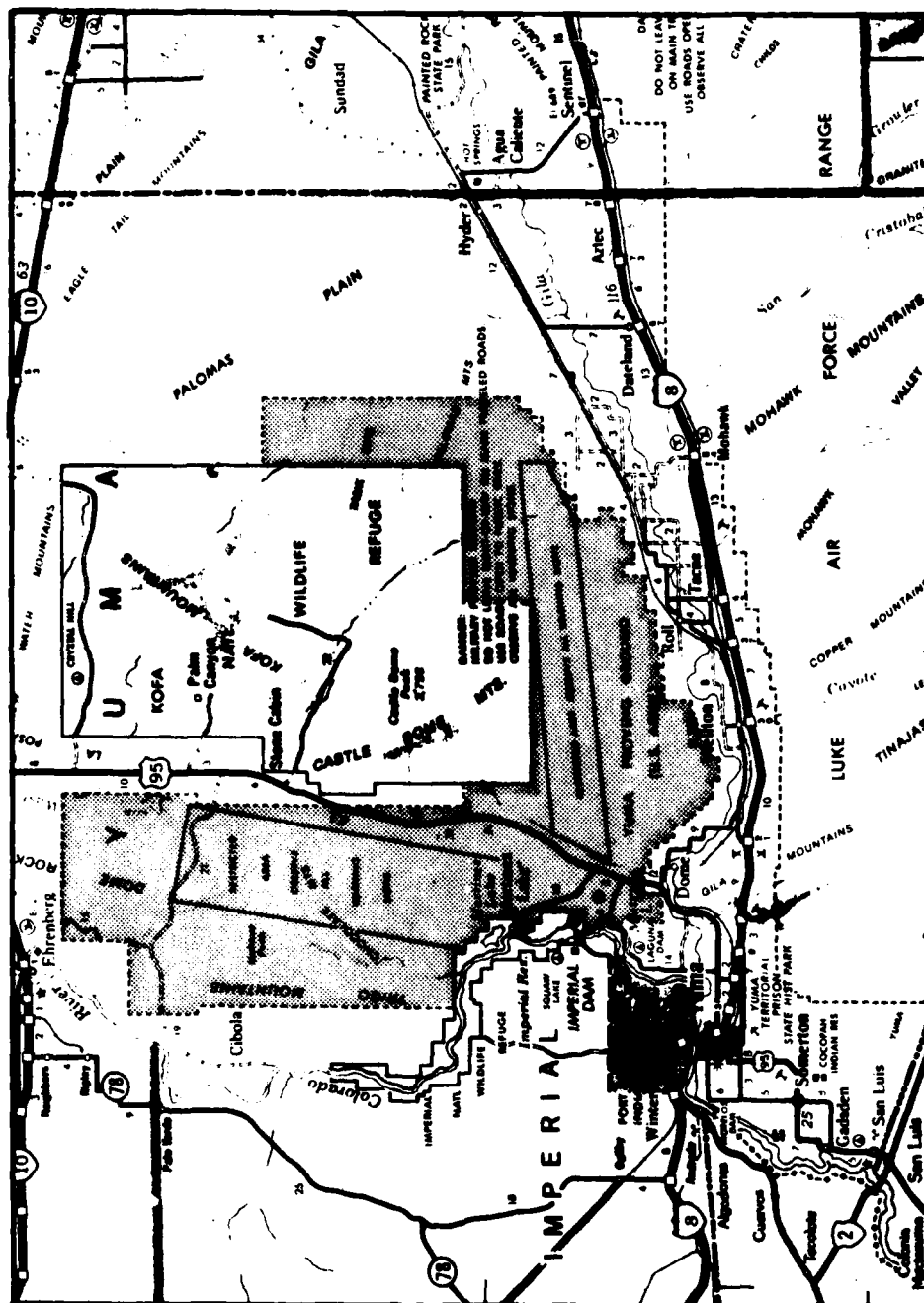


FIGURE 1. US ARMY YUMA PROVING GROUND AND YUMA, AZ, AREA.

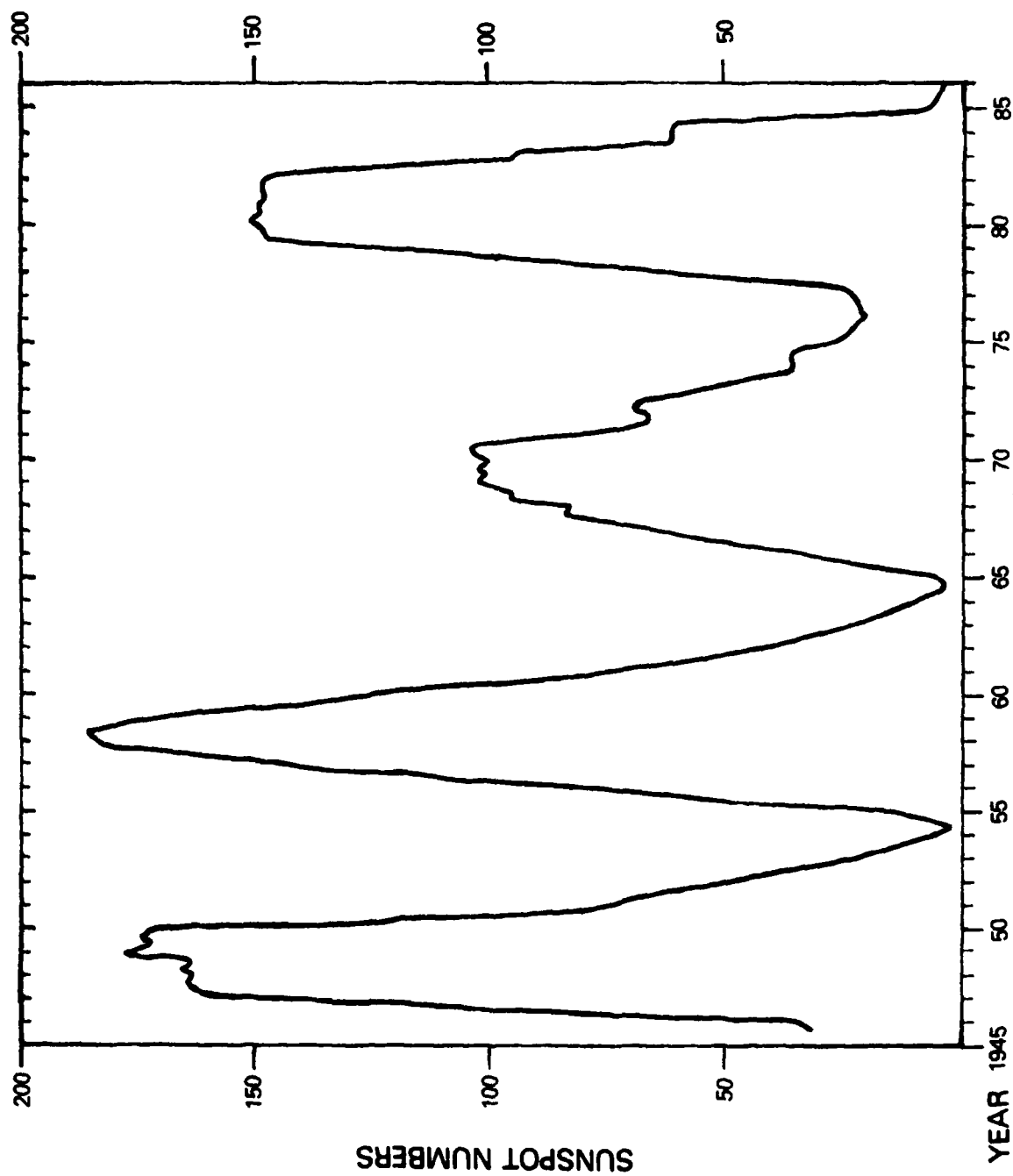


FIGURE 2. SOLAR ACTIVITY - OVERALL TREND

### **3. CLIMATE**

The climate of the YPG is generally characterized by clear skies, low relative humidity, uncomfortably warm summers, mild winters, light surface winds, unrestricted visibility, and little precipitation.

Summers, from June to September, are uncomfortably warm, making air conditioning an absolute necessity. As the relative humidity is usually low, evaporative coolers work well here.

Winters are mild, with morning lows generally in the low forties and afternoon maximums in the sixties. In a normal year temperatures do not fall below freezing, except at low elevations along the Colorado River and in depressions below the general ground level. These areas act as receptacles for the densest and coldest air; hence, temperatures are several degrees below those of the surrounding terrain. These areas also have slightly higher daytime temperatures, but the difference is much more noticeable at night.

### **4. TERRAIN**

The broad Colorado River, flowing from east to west through the city of Yuma, empties into the Gulf of California, 70 mi to the south. Castle Dome Mountains situated 40 mi to the northeast and the Gila Mountains, 20 mi to the southeast, are the only significant breaks in this desert plains region. Both ranges have elevations in excess of 3000 ft. The barren sand dunes of the Yuma desert cover most of the region south of Yuma between the Colorado River and the Gila Mountains. Fifty miles to the west of Yuma is the fertile Imperial Valley of California.

Excluding the irrigated sections to the west and the Yuma desert, the prevailing vegetation types in the Yuma region are creosote bush and mesquite at lower elevations on the desert floor with palo verde trees and cacti in the hills.

Trafficability, due to the mostly caliche soil, is excellent for wheeled vehicles at least 95 percent of the time; and aircraft can operate under visual flight rules almost continuously during the entire year.

YPG receives about 85 percent of all possible sunshine.

### **5. PRECIPITATION**

For most years, Yuma, Arizona, is the driest major city in the United States. The average annual precipitation of 3.51 inches is less than the amount received by many towns in southeastern Arizona during a single midsummer month. Yuma lies too far south to benefit from the winter rains brought into the state by storms originating in the North Pacific Ocean and too far west to benefit from the summer rains associated with moist air from the Gulf of Mexico. Most precipitation at YPG develops from tropical disturbances in the Pacific Ocean or the Gulf of California, and occurs during the summer months generally in the form of showers and thundershowers. The "monsoon season" of

the Southwestern United States does not really apply to the Yuma area, as the precipitation tables well prove.

The only measurable snowfall recorded between 1901 and 1975 in the Yuma area occurred in December 1932 when 1.5 inches fell. No snowfall occurred during the 33 yr of this report.

Precipitation averages for winter are very misleading since the averages are the result of very few wet months (comparably) and many exceptionally dry months. Consider, for example, December, when the mean was exceeded on the average only once in 3 yr and in the wetter years a measurement equal to or greater than 1.0 inch occurred only once in 8 yr.

YPG receives measurable precipitation on an average of 19 days a yr, with only 8 days recording amounts equal to or exceeding 0.10 inch. According to the averages, months with rainfall greater than or equal to 0.40 inch are, in order, August, January, September, and December. The driest months are May and June. Although climatologically May is the driest month in this study of 33 yr, June had 21 yr when not even a trace of rain fell and May counted only 12 yr in that category. If the heaviest rainfall ever recorded in 24 h had not occurred, the October average would be only 0.29 inch instead of 0.35 inch.

Appendix A has seven tables dealing with precipitation. Table A-1 presents an extensive table providing data on the occurrence or nonoccurrence of rainfall either measurable or a trace for each month of 29 yr of data, with the measurable amounts given in hundredths of inches from 0.01 through the greatest ever recorded, 3.02 inches. Table A-2 gives the number of occurrences by date and month when measurable rainfall has occurred; and table A-3 gives the average number of days per month that no rain, a trace, or measurable rainfall can be expected to occur based on the previous 29-yr happenings. Table A-4 analyzes the monthly totals by intervals; for example, during the 396 mo comprising 33 yr of data, 91 mo had not even a trace of rain, which is approximately 23 percent of the time. Monthly data were available for all 33 yr, but daily data were available for only 29 yr. Monthly summaries of annual totals and total days of rain or no rain by month comprise tables A-5 and A-6. The monthly and annual totals are summarized in table A-7.

Figure 3 compares the variability of the annual precipitation at YPG with the solar activity trend during 1954 through 1986.

## **6. TEMPERATURE**

Temperatures have been described, and accurately so, as hot in summer and ideal in winter. June, July, August, and September have an average maximum temperature of 100 °F or more with average minimums of 72 to 81 °F. Average maximum temperatures for December and January are 68 and 67 °F, and the average minimums are 42 and 41 °F, respectively.

The earliest date reporting 100 °F was 3 April 1957 and the latest date was 24 October 1959 with 102 °F. The highest temperature recorded at YPG was

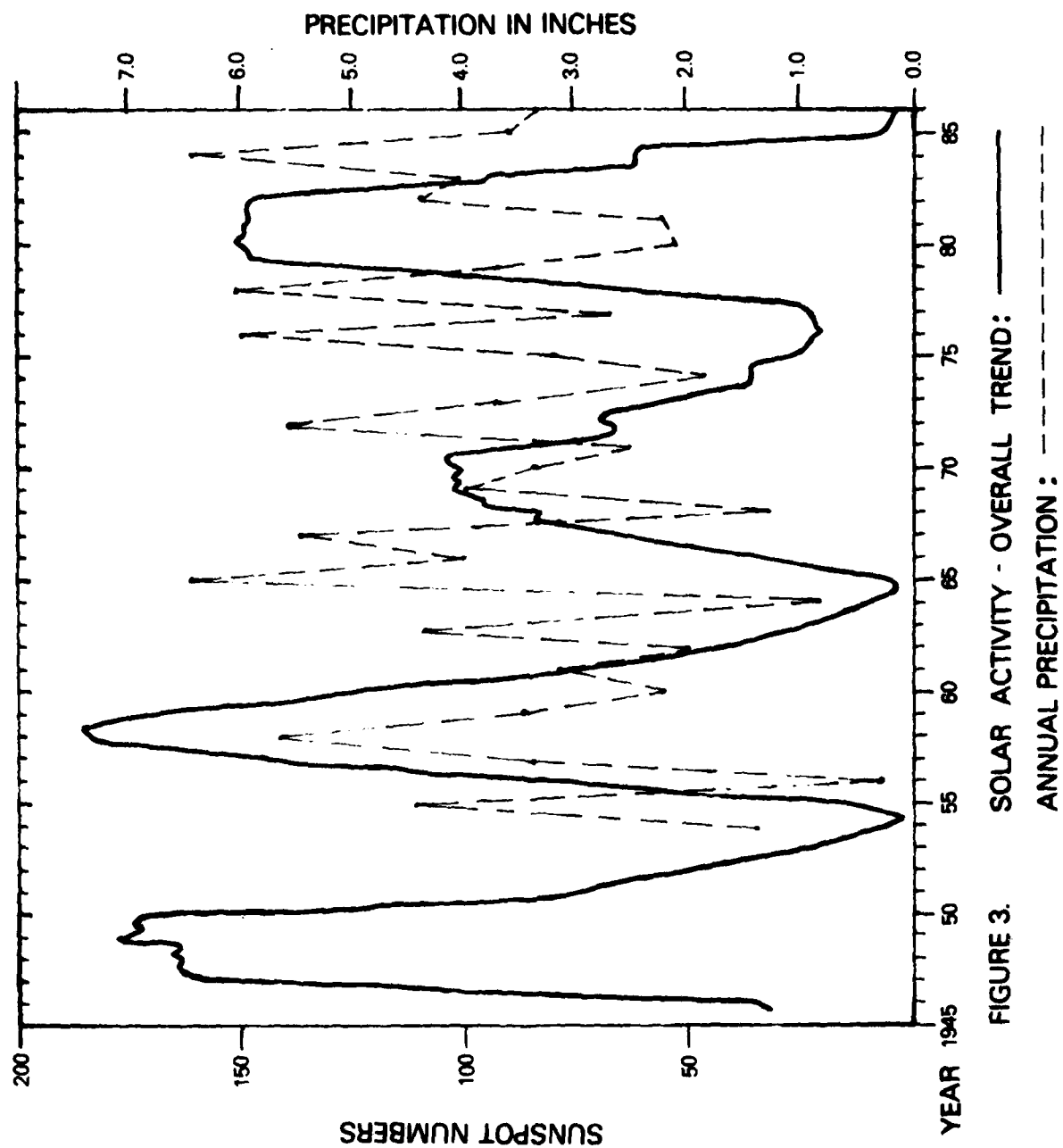


FIGURE 3. SOLAR ACTIVITY - OVERALL TREND: \_\_\_\_\_  
ANNUAL PRECIPITATION: - - - - -



118 °F on 24 June 1957, 31 July 1957, 9 July 1958, 27 August 1981, and 25 August 1985. The lowest was 23 °F on 8 January 1971. The city of Yuma reported a low of 22 °F in 1937 and a high of 120 °F in 1910. These two measurements were made at a location 4 mi north of the city airport.

Appendix B presents 34 tables concerning various compilations and analyses of temperature during this period of record. Using increments of 5 °F, tables B-1 and B-3 present the numerical count and the proportional percentages of occurrence of the maximum and minimum temperatures for each month represented in this 33-yr study. Tables B-2 and B-4, using the same numerical increments, show the percentage of time that each increment appears during any given month.

Table B-5 lists the warmest and coolest average maximum and the warmest and coolest average minimum temperatures for each month of the year and the year of occurrence.

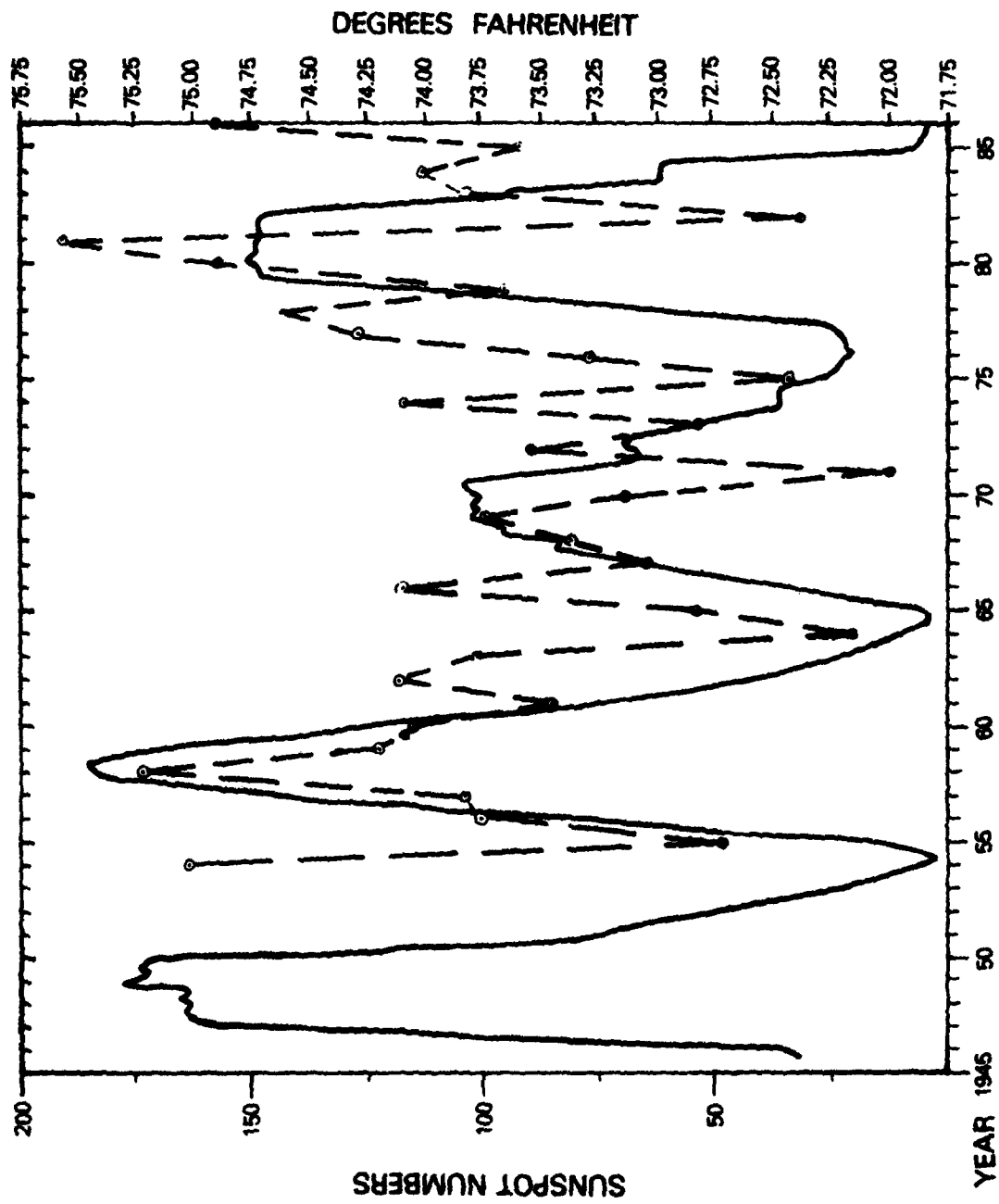
Tables B-6 through B-17 give the annual average maximum and minimum temperatures ranked warmest to coolest; tables B-18 through B-23 give insight into the maximum and minimum temperatures ever recorded for each date of the year by month and the range between them. Tables B-24 through B-26 provide seasonal average maximum, minimum, and daily average temperatures ranked numerically from warmest to coolest. The number of times that the average daily maximum temperature and the average daily minimum temperature actually occurred on that date are given in tables B-27 and B-28.

The annual average daily temperatures and rankings are in table 29; tables 30 through 33 deal with the monthly average daily temperatures. Table 34 compares the monthly sum of the daily average temperatures with the previous month, giving an average monthly differential for an average year plus the range of such differences for the 33-yr period. A section of this table compares successive years for each month and gives the range experienced over this time frame.

Figure 4 compares the variability of the annual daily average temperature at YPG with the solar activity trend during the period of 1954 through 1986. Although completely out of phase in 1954 and again in 1986, the annual daily average temperature correlates better with the solar trend than does the precipitation pattern. The trends of the temperature match reasonably well with the high peaks during these three cycles and are as unsteady as the solar trends during the second cycle.

## **7. SURFACE WINDS**

Surface winds are light throughout the year, with the average being 4 to 5 kn. Average peak winds during fall and winter are 14.3 kn and for spring and summer are 18.7 kn. Generally, the prevailing wind direction is from the north-northwest from November through February and from the west to southwest the remainder of the year. The highest surface wind gust recorded at YPG CMO was 61.7 kn (71 mph) on 20 March 1970. Table C-1 in appendix C enumerates the maximum gusty surface wind recorded for each month of the year during this period of record.



## **8. VISIBILITY**

Visibility at Yuma is rarely restricted, equalling 10 mi or greater 97 percent of the time. The average number of days per month when visibility can be expected to drop below 7 mi (11.265 km) peaks at 2 days in September. Thereafter, the average number of low visibility days declines to 1.7 in August; 0.8 in July; 0.7 in January, March, October, and November; 0.6 in June and December; and 0.5 in February, April, and May. Restriction of visibility is usually the result of dust, haze, or blowing sand. Fog dense enough or precipitation heavy enough to cause a restriction to visibility is rare.

## **9. THUNDERSTORMS**

Compared to the South and Midwest, Yuma is relatively free of thunderstorms. On the average, only 3 mo of the year experience more than one thunderstorm. August has an average of 4.4 thunderstorm days, while July and September are tied with 1.7 days each. October averages 0.8 day; June 0.7; March and May 0.3; April and November 0.2; and January, February, and December have the fewest with 0.1 thunderstorm day in an average month.

Thunderstorm data for 1957 - 1977 are reported in table C-2 of appendix C.

## **10. SKY CONDITION**

Cloudiness is rare at YPG. The annual sky cover (reported in tenths of sky from 0.0 to 1.0) is as follows: clear (0.0 to 0.3 cloud cover) = 67 percent of all hours; partly cloudy (0.3 to 0.7) = 24 percent; and cloudy (0.8 to 1.0) = 9 percent. Most of the cloudiness is in the form of cirriform clouds with bases from 25,000 ft up.

Sky condition data are presented in table C-3 of appendix C.

## **11. DUST**

Although dust is a major problem in most large areas of desert terrain, it does not occur frequently at the reporting station. See paragraph 7 above concerning all restrictive situations. Dust data comprises table C-4 of appendix C.

## **12. OTHER METEOROLOGICAL DATA**

Other meteorological elements are included in appendix C. Relative humidity data appear in table C-5, soil temperatures in table C-6, and atmospheric surface pressure in table C-7.

Appendix D provides data for those interested in degree days. Degree days - heating are in table D-1, while degree days - cooling are in tables D-2 through D-6.

Appendix E (tables E-1 through E-12) provides data on solar radiation received at YPG and is based on the average for each day and month from data acquired with the vertical Eppley radiometers.

Appendix F presents the sunrise and sunset tables for YPG. Tables F-1 through F-12 provide these data in both hours and minutes and hours and hundredths of hours.

Appendix G has selected records and averages established over this time period that may interest the reader.

The climate calendar is appendix H. Due to the late time frame for printing, the record high and low temperatures recorded in 1987 will be included through the month of October 1987; however, all of the averages presented are for the 33 years of 1954 through 1986, except where so stated.

**APPENDIX A. PRECIPITATION TABLES  
US ARMY YUMA PROVING GROUND, AZ**

**TABLE A-1. PRECIPITATION: MONTHLY FREQUENCY. AMOUNTS IN INCHES**  
**(PERIOD OF RECORD 1958 - 1986)**  
**US ARMY YUMA PROVING GROUND, AZ**

<u>Month</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
<b>Days</b>	899	819	899	870	899	870	899	899	870	899	870	899	10592
<b>None</b>	794	728	810	823	866	850	796	773	785	830	786	789	9630
<b>Trace</b>	36	25	22	24	15	14	65	60	36	30	38	32	397
<b>Rain</b>	69	66	67	23	18	6	38	66	49	39	46	78	565
<b>Ant</b>													
0.01	12	8	10	0	2	2	9	3	4	4	6	5	65
0.02	7	8	4	4	1	0	3	13	1	5	4	13	63
0.03	5	4	8	2	5	0	3	6	2	6	3	4	48
0.04	6	2	1	3	2	1	1	2	2	3	4	5	32
0.05	2	6	6	3	1	0	4	2	2	1	1	7	35
0.06	1	1	2	1	1	0	1	3	2	3	2	5	22
0.07	1	4	1	1	1	0	0	3	2	0	0	0	13
0.08	0	3	1	0	1	0	1	5	1	2	2	1	17
0.09	5	3	4	1	0	0	1	1	3	1	0	1	20
0.10	0	4	4	0	0	0	1	0	2	1	2	2	16
0.11	2	2	2	0	0	0	2	0	3	0	2	3	16
0.12	2	1	3	1	0	0	0	0	2	0	0	1	10
0.13	0	0	1	0	1	0	2	1	0	0	0	1	6
0.14	1	0	1	0	0	0	0	5	2	0	1	2	12
0.15	1	1	1	0	1	1	0	0	1	0	2	1	9
0.16	0	0	1	1	0	0	3	1	0	0	0	1	7
0.17	0	0	4	0	0	1	0	1	0	0	0	2	8
0.18	1	1	1	0	0	0	0	0	2	0	0	0	5
0.19	2	1	0	0	2	0	0	0	0	0	2	0	7
0.20	1	2	0	0	0	0	1	2	0	1	0	0	7
0.21	0	2	0	0	0	0	0	0	2	0	0	2	6
0.22	1	1	1	1	0	0	0	0	0	1	1	2	8
0.23	0	0	0	1	0	0	0	0	1	0	0	0	2
0.24	1	1	0	0	0	0	1	1	0	0	0	1	5
0.25	0	0	1	0	0	0	0	1	0	0	0	0	2
0.26	1	0	2	0	0	0	0	0	1	0	2	2	8
0.27	1	0	1	0	0	0	0	1	0	0	0	0	3
0.28	0	2	1	0	0	0	0	0	0	0	0	0	3
0.29	1	0	0	0	0	0	0	0	0	0	0	1	2
0.30	0	0	0	0	0	0	0	2	0	1	0	0	3
0.31	1	0	0	0	0	0	0	0	0	0	2	0	3
0.32	1	0	0	0	0	0	0	0	0	0	1	1	3
0.33	0	1	0	0	0	0	0	0	0	0	0	0	1
0.34	0	0	0	0	0	0	0	0	0	1	0	0	1
0.35	2	0	2	0	0	0	0	0	0	0	1	0	5
0.36	0	0	0	0	0	0	0	1	1	0	0	0	2
0.37	0	1	0	0	0	0	0	0	0	0	0	0	1
0.38	1	0	0	0	0	0	0	0	0	0	0	1	2
0.39	0	0	0	1	0	0	0	1	0	0	0	2	4
0.40	0	0	0	1	0	0	0	0	0	1	1	0	3

Table A-1. (cont)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
<u>Amt</u>													
0.41	0	0	0	0	0	0	0	0	1	0	0	0	1
0.42	0	0	0	0	0	0	1	0	0	0	0	0	1
0.43	0	0	0	0	0	0	0	0	0	1	1	0	2
0.44	1	1	0	0	0	0	0	0	1	0	0	3	6
0.45	1	0	0	0	0	0	0	1	0	0	0	0	2
0.46	0	0	1	0	0	0	0	0	1	0	0	1	3
0.47	0	0	0	0	0	0	0	0	0	1	0	2	3
0.48	2	1	0	0	0	0	0	0	0	0	0	0	3
0.49	0	0	0	0	0	0	0	0	1	1	0	0	2
0.50	0	0	0	0	0	0	1	2	0	0	0	0	3
0.52	0	1	2	0	0	0	0	0	0	0	0	0	3
0.53	0	0	0	1	0	0	0	0	0	0	0	0	1
0.55	0	0	0	0	0	0	0	0	0	0	0	1	1
0.56	0	0	0	0	0	0	0	0	0	0	1	0	1
0.57	0	0	0	0	0	0	0	0	0	1	1	1	3
0.58	1	0	0	0	0	0	0	1	0	0	0	0	2
0.59	0	0	0	0	0	0	0	0	0	0	0	1	1
0.60	0	0	0	0	0	0	0	0	0	0	0	1	1
0.62	1	0	0	0	0	0	0	0	2	0	0	0	3
0.65	0	0	0	0	0	0	0	1	0	0	0	0	1
0.66	0	0	0	0	0	0	0	0	1	0	0	0	1
0.70	0	0	0	0	0	0	0	0	1	0	0	0	1
0.72	1	0	0	0	0	0	1	1	0	0	1	0	4
0.74	0	0	0	0	0	0	0	1	0	0	0	1	2
0.75	0	0	0	0	0	0	0	1	1	0	1	0	3
0.77	1	0	0	0	0	0	0	0	0	0	0	0	1
0.78	0	0	0	0	0	0	0	0	0	1	0	0	1
0.79	0	0	0	0	0	0	0	0	1	0	0	0	1
0.83	0	1	0	0	0	0	0	0	0	0	0	0	1
0.84	0	0	0	0	0	0	0	0	1	0	0	0	1
0.86	0	0	0	0	0	0	1	0	0	0	0	0	1
0.87	0	0	0	0	0	0	0	2	0	0	0	0	2
0.88	0	1	0	0	0	0	0	0	0	0	0	0	1
0.90	0	1	0	0	0	0	0	0	0	0	0	1	2
0.93	1	0	0	0	0	0	0	0	0	0	0	0	1
0.95	0	0	0	0	0	0	0	0	0	0	1	0	1
0.96	0	0	1	0	0	0	0	0	0	0	0	0	1
1.22	0	0	0	0	0	0	0	0	0	0	1	0	1

Table A-1. (cont)

Month Amt	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1.30	0	0	0	0	0	1	0	0	0	0	0	0	1
1.35	1	0	0	0	0	0	0	0	0	0	0	0	1
1.36	0	1	0	0	0	0	1	0	0	0	0	0	2
1.37	0	0	0	0	0	0	0	0	1	0	0	0	1
1.41	0	0	0	0	0	0	0	0	1	0	0	0	1
1.46	0	0	0	1	0	0	0	0	0	0	0	0	1
1.55	0	0	0	0	0	0	0	0	0	1	0	0	1
1.75	0	0	0	0	0	0	0	1	0	0	0	0	1
1.95	0	0	0	0	0	0	0	0	1	0	0	0	1
3.02	0	0	0	0	0	0	0	0	0	1	0	0	1

## Category

Percent of measurable  
rainfall occurrences

Rainfall equal to or greater than 3.00 in occurred	1 time.	0.2
Rainfall equal to or greater than 1.00 in occurred	12 times.	2.1
Rainfall equal to or greater than 0.50 in occurred	57 times.	10.1
Rainfall equal to or greater than 0.25 in occurred	129 times.	22.8
Rainfall equal to or greater than 0.10 in occurred	250 times.	44.2
Rainfall equal to or greater than 0.05 in occurred	357 times.	63.2



**TABLE A-2. PRECIPITATION: MEASURABLE. NUMBER OF OCCURRENCES BY DATE  
(PERIOD OF RECORD: 1958 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month Date</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
1	*0	0	4	3	3	*0	*0	3	2	3	1	1
2	1	3	4	2	*0	*0	1	1	1	0	1	1
3	1	4	2	1	1	1	*0	1	3	2	0	2
4	*0	1	1	1	3	1	*0	2	2	2	*0	3
5	3	1	3	1	1	*0	1	2	1	3	1	*0
6	5	4	3	1	1	1	1	4	4	2	*0	1
7	3	4	1	*0	1	1	1	3	2	0	*0	3
8	3	2	4	*0	0	*0	2	1	1	*0	2	5
9	3	4	2	2	1	0	1	2	1	0	1	3
10	1	4	3	*0	1	0	*0	2	2	2	2	4
11	2	4	7	2	*0	0	0	2	2	0	2	3
12	2	*0	4	1	*0	0	1	3	1	1	1	*0
13	2	4	2	1	0	*0	1	*0	4	0	*0	4
14	3	3	3	2	0	0	1	3	1	*0	2	4
15	2	1	1	2	0	*0	1	5	0	1	3	3
16	2	2	1	*0	0	*0	1	4	1	2	3	2
17	3	1	1	*0	1	0	*0	4	1	3	2	3
18	1	2	1	0	*0	0	*0	1	1	2	3	3
19	2	3	2	*0	1	*0	*0	6	*0	2	1	1
20	3	3	1	*0	2	1	3	3	1	2	1	3
21	4	4	2	*0	0	*0	1	1	1	2	3	4
22	1	2	1	0	0	0	2	1	2	2	2	1
23	2	*0	1	*0	*0	0	1	3	3	3	3	2
24	3	2	3	0	1	*0	1	1	2	*0	3	2
25	2	1	1	0	*0	0	1	1	2	1	2	4
26	2	1	3	1	0	0	3	2	4	*0	1	5
27	4	1	2	0	1	0	2	0	1	0	1	2
28	1	1	1	2	*0	0	2	*0	1	*0	2	4
29	2	*2	1	1	0	*0	4	2	2	2	1	3
30	4	-	0	*0	0	1	4	*0	*0	3	1	*0
31	2	-	0	-	*0	-	1	1	-	0	-	1

NOTE: \* - Dates reporting a trace of rain one or more times but no measurable rainfall.

**TABLE A-3. PRECIPITATION: AVERAGE NUMBER OF DAYS BY MONTH  
(PERIOD OF RECORD: 1958 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month</u>	<u>Days</u>	<u>None</u>	<u>Trace</u>	<u>Measurable</u>	<u>Amount Inches</u>
Jan	31.00	27.38	1.24	2.38	0.46
Feb	*28.24	25.10	0.86	2.28	0.34
Mar	31.00	27.93	0.76	2.31	0.27
Apr	30.00	28.38	0.83	0.79	0.13
May	31.00	29.86	0.52	0.62	0.04
Jun	30.00	29.31	0.48	0.21	0.05
Jul	31.00	27.45	2.24	1.31	0.21
Aug	31.00	26.66	2.07	2.27	0.49
Sep	30.00	27.07	1.24	1.69	0.44
Oct	31.00	28.62	1.03	1.35	0.35
Nov	30.00	27.10	1.31	1.59	0.29
Dec	31.00	27.21	1.10	2.69	0.40

NOTE: Daily records not available for 1954-1957.  
\* - Allowance for leap years.

**TABLE A-4. PRECIPITATION: MONTHLY OCCURRENCES OF RAINFALL INTERVALS  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Inches of Precip</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Tot</u>
0.00	1	7	5	11	12	21	4	3	6	10	6	5	91
TRACE	5	0	1	6	8	7	10	4	5	6	5	2	59
0.01-0.25	12	17	16	11	12	4	11	13	8	7	13	12	136
0.26-0.50	3	1	6	2	1	0	3	1	6	4	1	5	33
0.51-0.75	6	5	1	2	0	0	2	3	2	1	3	3	28
0.76-1.00	2	2	1	0	0	0	1	2	1	0	3	2	14
1.01-1.25	1	0	2	0	0	0	0	2	0	2	0	0	7
1.26-1.50	0	0	1	0	0	1	1	1	2	0	0	1	7
1.51-1.75	1	0	0	0	0	0	1	3	0	1	2	2	10
1.76-2.00	1	0	0	1	0	0	0	0	0	1	0	0	3
2.01-2.25	0	0	0	0	0	0	0	1	2	0	0	1	4
2.26-2.50	1	1	0	0	0	0	0	0	0	0	0	0	2
2.51-2.75	0	0	0	0	0	0	0	0	1	0	0	0	1
-----													
3.76-4.00	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL	33	33	33	33	33	33	33	33	33	33	33	33	396

NOTE: Figures under each monthly column are the total number of years of record.

**TABLE A-5. PRECIPITATION: MONTHLY SUMMARIES OF ANNUAL RECORDS**  
**(PERIOD OF RECORD: 1954 - 1986)**  
**US ARMY YUMA PROVING GROUND, AZ**

<u>Amount</u> <u>Inches</u>	<u>None</u>	<u>Trace</u>	<u>.01 or</u> <u>more</u>	<u>.10 or</u> <u>more</u>	<u>.50 or</u> <u>more</u>	<u>1.0 or</u> <u>more</u>	<u>2.0 or</u> <u>more</u>	<u>3.0 or</u> <u>more</u>
<u>Month</u>								
Jan	1	5	27	18	10	3	1	0
Feb	6	0	27	18	9	2	1	0
Mar	5	1	27	18	6	3	0	0
Apr	11	6	16	5	3	1	0	0
May	12	8	13	5	0	0	0	0
Jun	21	7	5	3	1	1	0	0
Jul	4	10	19	11	4	2	0	0
Aug	3	4	26	16	11	6	0	0
Sep	6	5	22	19	8	5	3	0
Oct	9	6	18	11	6	4	1	1
Nov	4	7	22	17	8	2	0	0
Dec	5	2	26	19	9	4	1	0
Total	87	61	248	160	75	33	7	1
Percent	22	15	63	40	19	8	2	*0

NOTE: \* = 00.25 percent. All percentages rounded to nearest whole percent.

Amounts shown in columns greater than 0.01 in are included in the previous columns totals. Example: In Jan 2.0 in or more occurred 1 time. That 1 is part of the 3 shown under 1.0 in or more. None, trace and .01 in total 33 years for all months.

**TABLE A-6. PRECIPITATION: TOTAL DAYS RAIN/NO RAIN MONTHLY SUMMARIES**  
**(PERIOD OF RECORD: 1958 - 1986)**  
**US ARMY YUMA PROVING GROUND, AZ**

<u>Mo</u>	<u>Total</u>	<u>None</u>	<u>%</u>	<u>Measure</u>	<u>%</u>	<u>Trace</u>	<u>%</u>	<u>All Rain</u>	<u>%</u>
Jan	899	794	88.3	69	7.7	36	4.0	105	11.7
Feb	819	728	88.9	66	8.1	25	3.0	91	11.1
Mar	899	810	90.1	67	7.5	22	2.4	89	9.9
Apr	870	823	94.6	23	2.6	24	2.8	47	5.4
May	899	866	96.3	18	2.0	15	1.7	33	3.7
Jun	870	850	97.7	6	0.7	14	1.6	20	2.3
Jul	899	796	88.5	38	4.2	65	7.2	103	11.5
Aug	899	773	86.0	66	7.3	60	6.7	126	14.0
Sep	870	785	90.2	49	5.6	36	4.1	85	9.8
Oct	899	830	92.3	39	4.3	30	3.3	69	7.7
Nov	870	786	90.3	46	5.3	38	4.2	84	9.7
Dec	899	789	87.8	78	8.7	32	3.6	110	12.2

NOTE: The all rain column is the sum of the measure and trace columns.

TABLE A-7. PRECIPITATION: MONTHLY AND ANNUAL TOTALS  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ

<u>Month</u> <u>Year</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
1954	0.31	0.07	0.35	0.00	0.00	T	0.19	0.11	0.24	0.00	0.08	T	1.35
1955	1.55	0.02	0.00	0.03	0.00	0.00	0.58	2.19	0.00	0.00	T	0.05	4.42
1956	0.05	0.02	0.00	0.00	T	T	0.14	0.00	T	T	0.00	T	0.21
1957	0.61	0.05	0.21	0.22	T	0.00	T	0.33	0.00	1.89	T	0.07	3.38
1958	T	2.41	0.28	0.04	0.19	0.17	1.52	0.71	1.52	0.71	T	0.00	5.65
1959	0.09	0.23	0.03	T	0.01	T	0.03	1.25	0.18	0.05	0.02	1.55	3.44
1960	0.95	0.18	0.16	0.00	0.03	T	T	T	0.79	T	0.04	0.03	2.18
1961	0.23	0.00	T	T	0.00	0.00	T	1.20	0.15	T	0.03	1.50	3.11
1962	0.76	0.17	0.13	0.00	0.00	0.00	T	0.02	0.11	T	0.12	0.66	1.97
1963	0.48	0.12	0.22	0.05	T	T	T	0.13	0.06	1.17	0.10	0.00	4.33
1964	T	0.14	0.04	0.03	T	0.00	0.04	0.07	0.01	0.12	0.26	0.10	0.81
1965	0.66	0.52	0.09	1.91	0.00	0.00	0.11	0.03	T	0.00	0.99	2.11	6.42

TABLE A-7. (cont)

<u>Month</u> <u>Year</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
1966	0.66	0.47	0.44	0.00	T	T	0.27	0.14	0.27	1.61	0.10	0.04	4.00
1967	0.41	0.00	0.12	0.02	T	0.00	T	0.89	2.21	T	0.89	0.89	5.43
1968	0.09	0.54	0.06	0.05	0.00	0.00	0.37	T	0.00	0.03	T	0.07	1.21
1969	1.07	0.04	0.11	T	0.05	0.00	0.14	0.04	0.41	0.04	1.73	0.32	3.95
1970	T	0.95	1.38	T	0.00	0.00	0.02	0.57	0.11	0.08	T	0.22	3.33
1971	T	0.07	0.00	0.63	0.03	0.00	T	0.22	1.41	0.01	0.00	0.10	2.47
1972	0.00	0.00	0.00	T	T	1.31	T	0.24	T	3.78	0.12	0.07	5.52
1973	T	0.71	1.11	0.00	0.03	0.00	0.01	1.62	0.00	0.00	0.22	0.00	3.70
1974	0.74	0.00	0.13	0.00	0.00	0.00	0.12	0.04	0.29	0.26	T	0.18	1.76
1975	0.15	0.05	0.28	0.39	0.00	0.00	0.12	0.14	1.45	0.00	0.17	0.40	3.15
1976	0.03	0.92	0.05	0.29	0.01	0.00	0.68	0.00	2.63	0.34	0.60	0.38	5.93
1977	0.05	0.05	0.04	0.03	0.14	0.04	T	0.83	0.61	0.40	0.00	0.43	2.62

TABLE A-7. (cont.)

<u>Month</u> <u>Year</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
1978	1.82	1.41	0.51	0.06	0.04	0.00	T	0.00	T	1.03	0.59	0.54	6.00
1979	2.26	0.02	0.44	0.00	0.26	0.15	0.00	0.55	0.00	0.00	T	0.01	3.69
1980	0.57	0.72	0.48	0.04	0.18	0.01	0.00	T	0.06	0.00	0.00	0.00	2.06
1981	0.25	0.00	0.80	0.00	0.19	0.00	0.00	0.08	0.00	0.00	0.83	0.00	2.15
1982	0.17	0.15	1.14	0.00	0.03	0.00	0.05	1.70	0.26	T	0.19	0.63	4.32
1983	0.93	0.60	0.14	0.02	0.00	0.00	0.00	1.32	0.12	0.02	0.04	0.80	3.99
1984	0.10	0.00	0.00	0.58	T	T	1.39	1.76	0.35	0.00	0.52	1.72	6.42
1985	0.13	0.26	0.06	0.00	0.00	0.00	0.26	T	0.61	0.54	1.57	0.14	3.54
1986	0.05	0.20	0.17	T	0.00	0.00	0.94	0.03	0.32	0.82	0.46	0.33	3.32
<b>Total</b>	<b>15.17</b>	<b>11.06</b>	<b>8.97</b>	<b>4.39</b>	<b>1.19</b>	<b>1.68</b>	<b>6.98</b>	<b>16.21</b>	<b>14.65</b>	<b>12.52</b>	<b>9.67</b>	<b>13.34</b>	<b>115.83</b>
<b>Average</b>	<b>0.46</b>	<b>0.34</b>	<b>0.27</b>	<b>0.13</b>	<b>0.04</b>	<b>0.05</b>	<b>0.21</b>	<b>0.49</b>	<b>0.44</b>	<b>0.35</b>	<b>0.29</b>	<b>0.40</b>	<b>3.51</b>

**APPENDIX B. TEMPERATURE TABLES  
US ARMY YUMA PROVING GROUND, AZ**

TABLE B-1. MAXIMUM TEMPERATURES: TOTAL OCCURRENCES AND OVERALL PERCENTAGE  
MONTHLY SUMMARIES  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ

Month Temps	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	% of Maximals
40-44	0	0	0	0	0	0	0	0	0	0	0	2	2	0.02
45-49	8	2	0	0	0	0	0	0	0	0	0	6	16	0.13
50-54	23	9	0	0	0	0	0	0	0	0	3	27	62	0.51
55-59	98	29	4	1	0	0	0	0	0	1	9	99	241	2.00
60-64	190	80	40	4	0	0	0	0	0	3	53	144	514	4.27
65-69	265	182	135	40	1	0	0	0	0	12	131	293	1059	8.79
70-74	266	245	215	91	13	0	0	0	1	35	196	271	1333	11.06
75-79	142	206	200	131	59	0	0	0	6	97	230	145	1216	10.09
80-84	25	120	217	180	104	10	1	2	20	130	195	35	1039	8.62
85-89	3	47	138	219	140	44	1	6	51	202	146	0	997	8.28
90-94	0	12	63	204	224	69	15	26	113	259	26	0	1011	8.39
95-99	0	0	11	84	256	180	52	85	218	184	1	0	1017	8.89
100-104	0	0	0	35	160	264	251	337	315	87	0	0	1449	12.03
105-109	0	0	0	0	58	240	465	435	206	11	0	0	1415	11.74
110-114	0	0	0	0	7	152	210	117	59	2	0	0	547	4.54
115-119	0	0	0	0	1	31	28	15	1	0	0	0	76	0.63



TABLE B-2. MAXIMUM TEMPERATURES: MONTHLY PERCENTAGES OF OCCURRENCE  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ

<u>Month</u> <u>Temps</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
40-44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
45-49	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
50-54	2.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.6
55-59	9.6	3.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.9	9.7
60-64	18.6	8.6	3.9	0.4	0.0	0.0	0.0	0.0	0.0	0.3	5.4	14.1
65-69	26.0	19.5	13.2	4.0	0.1	0.0	0.0	0.0	0.0	1.2	13.2	28.7
70-74	26.0	26.3	21.0	9.2	1.3	0.0	0.0	0.0	0.1	3.4	19.8	26.5
75-79	13.9	22.1	19.6	13.2	5.8	0.0	0.0	0.0	0.6	9.5	23.2	14.2
80-84	2.5	12.9	21.2	18.2	10.2	1.0	0.1	0.2	2.0	12.7	19.7	3.4
85-89	0.3	5.0	13.5	22.1	13.7	4.4	0.1	0.6	5.2	19.7	14.7	0.0
90-94	0.0	1.3	6.2	20.6	21.9	7.0	1.5	2.5	11.4	25.3	2.6	0.0
95-99	0.0	0.0	1.1	8.5	25.0	18.2	5.1	8.3	22.0	18.0	0.1	0.0
100-104	0.0	0.0	0.0	3.5	15.6	26.7	24.5	32.9	31.8	8.5	0.0	0.0
105-109	0.0	0.0	0.0	0.0	5.7	24.2	45.5	42.5	20.8	1.1	0.0	0.0
110-114	0.0	0.0	0.0	0.0	0.7	15.4	20.5	11.4	6.0	0.2	0.0	0.0
115-119	0.0	0.0	0.0	0.0	0.1	3.1	2.7	1.5	0.1	0.0	0.0	0.0

TABLE B-3. MINIMUM TEMPERATURES: TOTAL OCCURRENCES AND OVERALL PERCENTAGE  
MONTHLY SUMMARIES  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ

Month Temps	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	% of Maximms
20-24	2	0	0	0	0	0	0	0	0	0	0	0	2	0.02
25-29	22	4	0	0	0	0	0	0	0	0	0	6	32	0.27
30-34	84	19	3	0	0	0	0	0	0	0	5	67	178	1.48
35-39	221	96	27	1	0	0	0	0	0	2	35	198	580	4.81
40-44	284	237	114	22	0	0	0	0	0	6	176	365	1204	10.00
45-49	274	290	293	100	6	0	0	0	0	32	271	271	1537	12.76
50-54	103	204	356	254	59	1	0	0	2	107	301	95	1482	12.30
55-59	30	69	174	324	177	13	0	0	14	248	158	17	1224	10.16
60-64	0	13	53	207	316	86	0	0	61	300	42	2	1080	8.97
65-69	0	0	3	75	310	243	16	28	213	221	2	1	1112	9.23
70-74	0	0	0	6	113	296	86	121	259	90	0	0	971	8.06
75-79	0	0	0	0	37	217	271	281	253	17	0	0	1076	8.93
80-84	0	0	0	0	5	120	472	439	172	0	0	0	1208	10.03
85-89	0	0	0	0	0	14	169	148	15	0	0	0	346	2.87
90-94	0	0	0	0	0	0	8	5	1	0	0	0	14	0.12

TABLE B-4. MINIMUM TEMPERATURES: MONTHLY PERCENTAGES OF OCCURRENCE  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ

Month Temps	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20-24	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25-29	2.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
30-34	8.2	2.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	6.6
35-39	21.7	10.3	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.2	3.5	19.4
40-44	27.8	25.4	11.1	2.2	0.0	0.0	0.0	0.0	0.0	0.6	17.8	35.7
45-49	26.9	31.1	28.6	10.1	0.6	0.0	0.0	0.0	0.0	3.1	27.4	26.5
50-54	10.1	21.9	34.8	25.7	5.8	0.1	0.0	0.0	0.2	10.5	30.4	9.3
55-59	2.9	7.4	17.0	32.7	17.3	1.3	0.0	0.0	1.4	24.2	16.0	1.7
60-64	0.0	1.4	5.2	20.9	30.9	8.7	0.0	0.0	6.2	29.3	4.2	0.2
65-69	0.0	0.0	0.3	7.6	30.3	24.5	1.6	2.7	21.5	21.6	0.2	0.1
70-74	0.0	0.0	0.0	0.6	11.0	29.9	8.4	11.8	26.2	8.8	0.0	0.0
75-79	0.0	0.0	0.0	0.0	3.6	21.9	26.5	27.5	25.6	1.7	0.0	0.0
80-84	0.0	0.0	0.0	0.0	0.5	12.1	46.2	43.0	17.4	0.0	0.0	0.0
85-89	0.0	0.0	0.0	0.0	0.0	1.4	16.5	14.5	1.5	0.0	0.0	0.0
90-94	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.5	0.1	0.0	0.0	0.0

**TABLE B-5. AVERAGE MAXIMUM AND MINIMUM TEMPERATURES BY MONTH  
WARMEST AND COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

	<u>Maximum</u>		<u>Minimum</u>	
	<u>Warmest</u>	<u>Coollest</u>	<u>Warmest</u>	<u>Coollest</u>
Jan	74.5 - 1986	59.7 - 1979	48.5 - 1981	35.9 - 1964
Feb	80.9 - 1954	66.9 - 1966	52.5 - 1968	39.1 - 1956
Mar	87.5 - 1972	70.5 - 1973	56.4 - 1978	45.7 - 1977
Apr	92.6 - 1954	75.9 - 1967	60.7 - 1959	50.7 - 1975
May	100.7 - 1984	86.4 - 1977	68.9 - 1958	58.5 - 1977
Jun	108.2 - 1978	95.7 - 1965	76.0 - 1978	65.9 - 1965
Jul	109.5 - 1980	102.4 - 1955	83.5 - 1959	77.9 - 1962
Aug	108.4 - 1981	101.2 - 1971	84.5 - 1969	74.8 - 1979
Sep	107.1 - 1956	93.3 - 1985	*77.7 - 1983	67.0 - 1985
Oct	95.3 - 1965	81.1 - 1972	66.5 - 1964	57.4 - 1981
Nov	81.8 - 1954	71.5 - 1957	53.9 - 1967	45.3 - 1956
Dec	75.8 - 1980	61.7 - 1978	47.2 - 1977	37.5 - 1968

NOTE: \* - Temperatures calculated to the nearest one hundredth degree, show a tie between 1983 and 1956; but the 1983 total had 2 degrees more.

**TABLE B-6. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

January

<u>Max Temp 33-Yr Avg = 67.71</u>				<u>Min Temp 33-Yr Avg = 42.50</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	69.61	11	+1.90	1954	40.52	25	-1.98
1955	60.74	32	-6.97	1955	41.77	20	-0.73
1956	70.84	6	+3.13	1956	44.13	12	+1.63
1957	65.10	26	-2.61	1957	44.26	10	+1.76
1958	70.45	10	+2.74	1958	42.71	15	+0.21
1959	72.32	2	+4.61	1959	42.23	19	-0.27
1960	62.68	31	-5.03	1960	39.13	30	-3.37
1961	71.29	4	+3.58	1961	44.23	11	+1.73
1962	67.84	17	+0.13	1962	43.19	13	+0.69
1963	64.13	29	-3.58	1963	37.94	31	-4.56
1964	65.32	25	-2.39	1964	35.94	33	-6.56
1965	68.32	15	+0.61	1965	44.52	* 8	+2.02
1966	62.71	30	-5.00	1966	40.68	24	-1.82
1967	68.00	16	+0.29	1967	39.58	27	-2.92
1968	67.65	18	-0.06	1968	42.61	16	+0.11
1969	69.00	12	+1.29	1969	48.03	2	+5.53
1970	66.97	22	-0.74	1970	41.74	21	-0.76
1971	68.94	13	+1.23	1971	39.81	26	-2.69
1972	67.35	20	-0.36	1972	36.74	32	-5.76
1973	65.00	27	-2.71	1973	39.39	29	-3.11
1974	66.23	23	-1.48	1974	42.77	14	+0.27
1975	68.74	14	+1.03	1975	39.45	28	-3.05
1976	71.23	5	+3.52	1976	41.19	23	-1.31
1977	67.23	21	-0.48	1977	42.32	18	-0.18
1978	66.16	24	-1.55	1978	45.90	6	+3.40
1979	59.71	33	-8.00	1979	42.42	17	-0.08
1980	70.74	7	+3.03	1980	47.10	3	+4.60
1981	72.13	3	+4.42	1981	48.45	1	+5.95
1982	# 67.39	19	-0.32	1982	# 41.68	22	-0.82
1983	70.58	9	+2.87	1983	44.87	7	+2.37
1984	70.71	8	+3.00	1984	46.48	4	+3.98
1985	64.68	28	-3.03	1985	44.52	* 8	+2.02
1986	74.52	1	+6.81	1986	46.06	5	+3.56

Range T: Hi - Low = 14.81 deg.

Range T: Hi - Low = 12.51 deg.

NOTE: # - Month with 28 days of data. The average is the 28 day avg.  
\* - Numerical position tie. Each has same total degrees.

**TABLE B-7. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

**February**

<u>Max Temp 33-Yr Avg = 72.85</u>				<u>Min Temp 33-Yr Avg = 46.28</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	80.89	1	+8.04	1954	49.46	6	+3.18
1955	67.46	31	-5.39	1955	41.75	31	-4.53
1956	67.38	32	-5.47	1956	39.07	33	-7.21
1957	77.07	4	+4.22	1957	51.32	2	+5.04
1958	73.36	16	+0.51	1958	48.71	*10	+2.43
1959	69.93	26	-2.92	1959	43.64	27	-2.64
1960	68.72	*28	-4.13	1960	43.79	26	-2.49
1961	74.96	10	+2.11	1961	47.04	14	+0.76
1962	70.39	22	-2.46	1962	46.86	15	+0.58
1963	79.93	2	+7.08	1963	51.29	3	+5.01
1964	68.72	*28	-4.13	1964	41.48	32	-4.80
1965	71.46	21	-1.39	1965	45.86	17	-0.42
1966	66.93	33	-5.92	1966	42.93	29	-3.35
1967	75.00	9	+2.15	1967	45.57	18	-0.71
1968	76.66	6	+3.81	1968	52.48	1	+6.20
1969	68.64	30	-4.21	1969	44.29	29	-1.99
1970	73.93	*14	+1.08	1970	48.79	8	+2.51
1971	73.93	*14	+1.08	1971	44.32	22	-1.96
1972	76.90	5	+4.05	1972	44.66	21	-1.62
1973	70.36	*23	-2.49	1973	46.68	16	+0.40
1974	72.79	18	-0.06	1974	42.96	28	-3.32
1975	71.54	20	-1.31	1975	42.54	30	-3.74
1976	73.24	17	+0.39	1976	48.76	9	+2.48
1977	78.29	3	+5.44	1977	44.21	24	-2.07
1978	71.89	19	-0.96	1978	49.57	5	+3.29
1979	70.36	*23	-2.49	1979	45.11	19	-1.17
1980	75.21	7	+2.36	1980	51.00	4	+4.72
1981	75.07	8	+2.22	1981	48.71	*10	+2.43
1982	74.14	12	+1.29	1982	48.36	12	+2.08
1983	70.14	25	-2.71	1983	48.07	13	+1.79
1984	74.07	13	+1.22	1984	45.07	20	-1.21
1985	69.79	27	-3.06	1985	44.14	25	-2.14
1986	74.93	11	+2.08	1986	48.93	7	+2.65

Range T: Hi - Low = 13.96 deg.

Range T: Hi - Low = 13.41 deg.

NOTE: \* - Numerical position tie. Each has same total degrees.

**TABLE B-8. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

March

<u>Max Temp 33-Yr Avg = 77.56</u>				<u>Min Temp 33-Yr Avg = 50.34</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	76.55	18	-2.01	1954	47.71	*29	-2.63
1955	78.03	15	+0.47	1955	50.84	15	+0.50
1956	80.87	7	+3.31	1956	49.19	21	-1.15
1957	78.58	*12	+1.02	1957	52.42	7	+2.08
1958	71.35	32	-6.21	1958	48.94	24	-1.40
1959	81.90	4	+4.34	1959	51.26	*11	+0.92
1960	82.68	3	+5.12	1960	52.58	* 4	+2.24
1961	78.42	14	+0.86	1961	49.26	20	-1.08
1962	73.26	31	-4.30	1962	45.94	32	-4.40
1963	77.00	16	-0.56	1963	48.58	27	-1.76
1964	75.10	25	-2.46	1964	46.29	31	-4.05
1965	73.84	29	-3.72	1965	49.00	23	-1.34
1966	80.16	9	+2.60	1966	50.97	14	+0.63
1967	78.84	11	+1.28	1967	51.94	9	+1.60
1968	78.58	*12	+1.02	1968	52.58	* 4	+2.24
1969	75.94	21	-1.62	1969	49.10	22	-1.24
1970	74.97	26	-2.59	1970	50.00	*17	-0.34
1971	81.35	6	+3.79	1971	50.00	*17	-0.34
1972	87.52	1	+9.96	1972	55.65	2	+5.31
1973	70.45	33	-7.11	1973	47.71	*29	-2.63
1974	79.52	10	+1.96	1974	51.26	*11	+0.92
1975	74.52	27	-3.04	1975	48.10	28	-2.24
1976	76.97	17	-0.59	1976	48.68	26	-1.66
1977	74.13	28	-3.43	1977	45.74	33	-4.60
1978	80.35	8	+2.79	1978	56.35	1	+6.01
1979	75.29	24	-2.27	1979	51.10	13	+0.76
1980	75.90	22	-1.66	1980	50.42	16	+0.08
1981	76.45	19	-1.11	1981	52.26	8	+1.92
1982	73.68	30	-3.88	1982	48.74	25	-1.60
1983	76.39	20	-1.17	1983	52.45	6	+2.11
1984	81.48	5	+3.92	1984	51.48	10	+1.14
1985	75.81	23	-1.75	1985	49.81	19	-0.53
1986	83.48	2	+5.92	1986	54.97	3	+4.63

Range T: Hi - Low = 17.07 deg.

Range T: Hi - Low = 10.61 deg.

NOTE: \* = Numerical position tie. Each has same total degrees.

**TABLE B-9. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

April

<u>Max Temp 33-Yr Avg = 84.88</u>				<u>Min Temp 33-Yr Avg = 56.21</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	82.63	2	+7.75	1954	59.97	3	+3.76
1955	82.47	26	-2.41	1955	54.83	*24	-1.38
1956	83.23	*22	-1.65	1956	56.60	16	+0.39
1957	84.40	18	-0.48	1957	56.17	20	-0.04
1958	85.40	13	+0.52	1958	56.40	17	+0.19
1959	90.63	3	+5.75	1959	60.67	1	+4.46
1960	87.67	8	+2.79	1960	57.87	9	+1.66
1961	88.17	7	+3.29	1961	56.87	14	+0.66
1962	92.87	1	+7.99	1962	59.37	4	+3.16
1963	81.10	29	-3.78	1963	53.57	29	-2.64
1964	83.23	*22	-1.65	1964	54.23	26	-1.98
1965	82.73	25	-2.15	1965	58.17	7	+1.96
1966	88.53	5	+3.65	1966	58.60	6	+2.39
1967	75.93	33	-8.95	1967	50.83	32	-5.38
1968	83.63	19	-1.25	1968	56.90	13	+0.69
1969	85.10	15	+0.22	1969	57.80	10	+1.59
1970	79.83	30	-5.05	1970	52.23	31	-3.98
1971	82.23	27	-2.65	1971	54.20	27	-2.01
1972	86.90	9	+2.02	1972	57.00	12	+0.79
1973	82.97	24	-1.91	1973	55.23	23	-0.98
1974	86.47	12	+1.59	1974	56.27	19	+0.06
1975	76.80	32	-8.08	1975	50.70	33	-5.51
1976	82.10	28	-2.78	1976	53.97	28	-2.24
1977	88.47	6	+3.59	1977	54.83	*24	-1.38
1978	83.57	20	-1.31	1978	56.37	18	+0.16
1979	86.60	10	+1.72	1979	56.77	15	+0.56
1980	#85.28	14	+0.40	1980	#55.55	22	-0.66
1981	84.43	17	-0.45	1981	59.03	5	+2.82
1982	84.77	16	-0.11	1982	57.23	11	+1.02
1983	78.80	31	-6.08	1983	52.50	30	-3.71
1984	83.53	21	-1.35	1984	55.87	21	-0.34
1985	90.10	4	+5.22	1985	60.57	2	+4.36
1986	86.53	11	+1.65	1986	58.10	8	+1.89

Range T: Hi - Low = 16.94 deg.

Range T: Hi - Low = 9.97 deg.

NOTE: # = Month with 29 days of data. The average is the 29-day avg.  
\* = Numerical position tie. Each has same total degrees.



**TABLE B-10. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

May

<u>Max Temp 33-Yr Avg = 93.03</u>				<u>Min Temp 33-Yr Avg = 63.71</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	96.32	4	+3.29	1955	65.10	10	+1.39
1955	90.29	28	-2.74	1955	62.61	23	-1.10
1956	93.71	15	+0.68	1956	65.19	8	+1.48
1957	88.35	30	-4.68	1957	60.74	30	-2.97
1958	99.48	3	+6.45	1958	68.94	1	+5.23
1959	90.90	26	-2.13	1959	62.26	25	-1.45
1960	93.45	16	+0.42	1960	63.58	18	-0.13
1961	91.58	*24	-1.45	1961	62.29	24	-1.42
1962	90.71	27	-2.32	1962	59.50	32	-3.81
1963	94.81	10	+1.78	1963	66.19	4	+2.48
1964	91.94	21	-1.09	1964	62.13	26	-1.58
1965	90.10	29	-2.93	1965	63.00	22	-0.71
1966	95.90	6	+2.87	1966	67.52	3	+3.81
1967	91.71	23	-1.32	1967	63.94	16	+0.23
1968	93.13	17	+0.10	1968	64.55	13	+0.84
1969	95.58	8	+2.55	1969	65.68	6	+1.97
1970	94.32	13	+1.29	1970	64.65	12	+0.94
1971	86.87	32	-6.16	1971	60.81	29	-2.90
1972	93.10	18	+0.07	1972	65.13	9	+1.42
1973	96.23	5	+3.20	1973	64.87	11	+1.16
1974	94.39	12	+1.36	1974	63.55	19	-0.16
1975	91.58	*24	-1.45	1975	61.06	28	-2.65
1976	94.68	11	+1.65	1976	65.26	7	+1.55
1977	86.35	33	-6.68	1977	58.55	33	-5.16
1978	94.19	14	+1.16	1978	64.52	14	+0.81
1979	91.81	22	-1.22	1979	63.71	17	0.00
1980	88.16	31	-4.87	1980	60.23	31	-3.48
1981	92.55	19	-0.48	1981	63.32	20	-0.39
1982	92.03	20	-1.00	1982	62.03	27	-1.68
1983	99.84	2	+6.81	1983	63.10	21	-0.61
1984	100.74	1	+7.71	1984	68.10	2	+4.39
1985	94.90	9	+1.87	1985	66.03	5	+2.32
1986	95.29	7	+2.26	1986	63.97	15	+0.26

Range T: Hi - Low = 14.39 deg.

Range T: Hi - Low = 10.39 deg.

NOTE: \* = Numerical position tie. Each has same total degrees.

**TABLE B-11. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

June

<u>Max Temp 33-Yr Avg = 102.71</u>				<u>Min Temp 33-Yr Avg = 72.23</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	101.17	24	-1.54	1954	71.63	20	-0.60
1955	100.80	26	-1.91	1955	70.97	22	-1.26
1956	103.93	14	+1.22	1956	74.90	6	+2.67
1957	105.03	9	+2.32	1957	74.87	7	+2.64
1958	102.27	17	-0.44	1958	74.03	11	+1.80
1959	106.20	6	+3.49	1959	75.53	4	+3.30
1960	107.73	* 2	+5.02	1960	75.83	3	+3.60
1961	105.17	7	+2.46	1961	74.50	9	+2.27
1962	101.60	20	-1.11	1962	70.03	25	-2.20
1963	97.37	32	-5.34	1963	69.73	26	-2.50
1964	100.07	27	-2.64	1964	69.53	28	-2.70
1965	95.73	33	-6.98	1965	65.90	33	-6.33
1966	101.63	19	-1.08	1966	73.17	15	+0.94
1967	97.53	31	-5.18	1967	69.57	27	-2.66
1968	103.23	16	+0.52	1968	72.00	18	-0.23
1969	97.63	30	-5.08	1969	69.33	30	-2.90
1970	101.30	*22	-1.41	1970	73.23	14	+1.00
1971	99.93	28	-2.78	1971	70.77	*23	-1.46
1972	101.50	21	-1.21	1972	73.73	12	+1.50
1973	104.03	13	+1.32	1973	71.57	21	-0.66
1974	107.20	4	+4.59	1974	74.53	8	+2.30
1975	101.90	18	-0.81	1975	69.40	29	-2.83
1976	103.33	15	+0.59	1976	70.77	*23	-1.46
1977	105.07	8	+2.36	1977	73.37	13	+1.14
1978	108.20	1	+5.49	1978	76.03	1	+3.80
1979	104.70	11	+1.99	1979	72.60	16	+0.37
1980	104.50	12	+1.79	1980	71.70	19	-0.53
1981	107.73	* 2	+5.02	1981	75.93	2	+3.70
1982	98.83	29	-3.88	1982	68.13	32	-4.10
1983	101.30	*22	-1.41	1983	68.63	31	-3.60
1984	100.97	25	-1.74	1984	72.53	17	+0.30
1985	106.27	5	+3.56	1985	74.23	10	+2.00
1986	104.84	10	+2.12	1986	74.93	5	+2.70

Range T: Hi - Low = 12.47 deg.

Range T: Hi - Low = 10.13 deg.

NOTE: \* = Numerical position tie. Each has same total degrees.

**TABLE B-12. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

July

<u>Max Temp 33-Yr Avg = 106.28</u>				<u>Min Temp 33-Yr Avg = 80.44</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	106.68	15	+0.40	1954	80.39	17	-0.05
1955	102.35	33	-3.93	1955	78.06	32	-2.38
1956	104.58	26	-1.70	1956	80.74	15	+0.30
1957	108.77	4	+2.49	1957	82.59	4	+2.15
1958	107.74	* 7	+1.46	1958	78.71	27	-1.73
1959	108.26	* 5	+1.98	1959	83.52	1	+3.08
1960	108.94	* 2	+2.66	1960	80.32	18	+0.12
1961	105.94	19	-0.34	1961	79.42	24	-1.02
1962	107.29	10	+1.01	1962	77.94	33	-2.50
1963	106.87	13	+0.59	1963	80.61	16	+0.17
1964	106.61	16	+0.33	1964	81.26	10	+0.82
1965	104.97	23	-1.31	1965	80.03	20	-0.41
1966	105.61	21	-0.67	1966	81.52	8	+1.08
1967	105.65	20	-0.63	1967	83.39	2	+2.95
1968	103.74	31	-2.54	1968	79.71	21	-0.73
1969	105.39	22	-0.89	1969	80.87	14	+0.43
1970	106.74	14	+0.46	1970	83.35	3	+2.91
1971	106.03	18	-0.25	1971	81.52	* 8	+1.08
1972	108.26	* 5	+1.98	1972	81.71	7	+1.27
1973	106.13	17	-0.15	1973	79.26	26	-1.18
1974	103.90	30	-2.38	1974	79.65	22	-0.79
1975	104.74	24	-1.54	1975	80.16	19	-0.28
1976	103.94	29	-2.34	1976	78.26	29	-2.18
1977	107.26	*11	+0.98	1977	81.16	*11	+0.72
1978	108.94	* 2	+2.66	1978	82.29	5	+1.85
1979	107.26	*11	+0.98	1979	78.20	31	-2.24
1980	109.52	1	+3.24	1980	81.10	12	+0.66
1981	104.16	28	-2.12	1981	81.16	*11	+0.72
1982	104.65	25	-1.63	1982	78.42	28	-2.02
1983	107.48	9	+1.20	1983	79.39	25	-1.05
1984	102.58	32	-3.70	1984	79.45	23	-0.99
1985	107.74	* 7	+1.46	1985	82.19	6	+1.75
1986	104.29	27	-1.99	1986	78.23	30	-2.21

Range T: Hi - Low = 7.17 deg.

Range T: Hi - Low = 5.58 deg.

NOTE: \* = Numerical position tie. Each has same total degrees.

**TABLE B-13. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

August

<u>Max Temp 33-Yr Avg = 104.72</u>				<u>Min Temp 33-Yr Avg = 79.73</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	104.23	19	-0.49	1954	77.29	29	-2.44
1955	101.74	31	-2.98	1955	81.13	9	+1.40
1956	106.87	6	+2.15	1956	77.26	30	-2.47
1957	103.48	25	-1.24	1957	79.48	*18	-0.25
1958	104.97	15	+0.25	1958	81.87	6	+2.14
1959	103.55	24	-1.17	1959	79.32	21	-0.41
1960	105.97	* 8	+1.25	1960	80.16	16	+0.43
1961	103.81	22	-0.91	1961	79.55	17	-0.18
1962	108.97	1	+4.25	1962	79.55	17	-0.18
1963	103.19	27	-1.53	1963	80.23	15	+0.50
1964	103.61	23	-1.11	1964	79.26	22	-0.47
1965	104.58	18	-0.14	1965	80.35	*13	+0.62
1966	105.33	12	+0.61	1966	81.55	8	+1.82
1967	105.90	11	+1.18	1967	82.32	4	+2.59
1968	101.13	33	-3.59	1968	77.35	28	-2.38
1969	108.26	3	+3.54	1969	84.52	1	+4.79
1970	105.19	13	+0.47	1970	83.52	2	+3.79
1971	101.19	32	-3.53	1971	82.23	5	+2.50
1972	102.10	30	-2.62	1972	77.77	*25	-1.96
1973	104.61	17	-0.11	1973	78.90	23	-0.83
1974	106.00	7	+1.28	1974	76.94	23	-0.83
1975	107.55	4	+2.83	1975	77.52	27	-2.21
1976	105.10	14	+0.38	1976	75.52	32	-4.21
1977	104.19	20	-0.53	1977	80.61	10	+0.88
1978	104.65	16	-0.07	1978	79.45	20	-0.28
1979	102.97	28	-1.75	1979	* 74.80	33	-4.93
1980	105.97	* 8	+1.25	1980	77.77	*25	-1.96
1981	108.37	2	+3.65	1981	81.65	7	+1.92
1982	104.03	21	-0.69	1982	80.45	*11	+0.72
1983	102.16	29	-2.56	1983	78.77	24	-0.96
1984	103.26	26	-1.46	1984	79.48	*18	-0.25
1985	107.10	5	+2.38	1985	80.45	*11	+0.72
1986	105.94	10	+1.22	1986	83.16	3	+3.43

Range T: Hi - Low = 7.84 deg.

Range T: Hi - Low = 9.72 deg.

NOTE: # = Only 30 days of data. The average is the 30-day avg.  
\* = Numerical position tie. Each has same total degrees.

**TABLE B-14. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

September

<u>Max Temp 33-Yr Avg = 99.99</u>				<u>Min Temp 33-Yr Avg = 73.34</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	102.83	3	+2.84	1954	75.77	7	+2.43
1955	101.50	11	+1.51	1955	74.70	11	+1.36
1956	107.10	1	+7.11	1956	77.67	2	+4.33
1957	101.93	8	+1.94	1957	72.80	21	-0.54
1958	101.77	10	+1.78	1958	75.00	9	+1.66
1959	98.83	24	-1.16	1959	71.13	26	-2.21
1960	102.43	5	+1.44	1960	74.33	13	+0.99
1961	97.53	28	-2.46	1961	69.77	30	-3.57
1962	100.97	15	+0.98	1962	74.90	10	+1.56
1963	102.63	4	+2.64	1963	76.03	6	+2.69
1964	98.97	23	-1.02	1964	71.53	25	-1.81
1965	96.77	29	-3.22	1965	69.90	29	-3.44
1966	99.97	18	-0.02	1966	74.67	12	+1.33
1967	96.30	30	-3.69	1967	74.13	14	+0.79
1968	101.13	13	+1.14	1968	71.77	24	-1.57
1969	101.87	9	+1.88	1969	77.40	3	+4.06
1970	98.10	27	-1.89	1970	72.87	20	-0.47
1971	99.00	22	-0.99	1971	74.07	16	+0.73
1972	98.43	26	-1.56	1972	72.17	22	-1.17
1973	99.47	19	-0.52	1973	69.20	31	-4.14
1974	100.80	17	+0.81	1974	75.53	8	+2.19
1975	101.10	14	+1.11	1975	73.87	17	+0.53
1976	94.27	32	-5.72	1976	71.07	27	-2.27
1977	99.20	21	-0.79	1977	72.97	19	-0.37
1978	98.47	25	-1.52	1978	73.37	18	+0.03
1979	106.40	2	+6.41	1979	76.57	4	+3.23
1980	102.13	7	+2.14	1980	70.90	28	-2.44
1981	102.40	6	+2.41	1981	74.10	15	+0.76
1982	99.37	20	-0.62	1982	72.10	23	-1.24
1983	100.87	16	+0.88	1983	77.73	1	+4.39
1984	101.40	12	+1.41	1984	76.50	5	+3.16
1985	93.30	33	-6.69	1985	67.03	33	-6.31
1986	94.57	31	-5.42	1986	68.53	32	-4.81

Range T: Hi - Low = 13.80 deg.

Range T: Hi - Low = 10.70 deg.

**TABLE B-15. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

October

<u>Max Temp 33-Yr Avg = 89.18</u>				<u>Min Temp 33-Yr Avg = 61.34</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	92.87	7	+3.69	1954	63.10	9	+1.76
1955	93.77	2	+4.59	1955	64.77	5	+3.43
1956	89.26	*17	+0.08	1956	59.81	23	-1.53
1957	84.06	30	-5.12	1957	60.48	20	-0.86
1958	93.00	* 4	+3.82	1958	65.23	4	+3.89
1959	90.90	12	+0.72	1959	60.61	18	-0.73
1960	88.77	20	-0.41	1960	61.48	15	+0.14
1961	88.81	19	-0.37	1961	58.00	31	-3.34
1962	90.81	13	+1.63	1962	60.16	22	-1.18
1963	90.39	14	+1.21	1963	65.35	3	+4.01
1964	93.29	3	+4.11	1964	66.45	1	+5.11
1965	95.26	1	+6.08	1965	61.65	14	+0.31
1966	88.61	21	-0.57	1966	60.55	19	-0.79
1967	91.97	9	+2.79	1967	62.35	11	+1.01
1968	90.29	15	+1.11	1968	60.23	21	-1.11
1969	84.94	29	-4.24	1969	58.87	27	-2.47
1970	85.77	28	-3.41	1970	58.74	28	-2.60
1971	81.90	32	-7.28	1971	57.94	32	-3.40
1972	81.13	33	-8.05	1972	62.58	10	+1.24
1973	91.03	11	+1.85	1973	59.74	24	-1.60
1974	89.26	*17	+0.08	1974	63.55	8	+2.21
1975	88.00	22	-1.18	1975	58.32	29	-3.02
1976	87.74	23	-1.44	1976	60.68	16	-0.66
1977	92.94	6	+3.76	1977	64.71	6	+3.37
1978	93.00	* 4	+3.82	1978	66.16	2	+4.82
1979	92.84	8	+3.66	1979	61.77	13	+0.43
1980	91.81	10	+2.63	1980	60.65	17	-0.69
1981	86.61	25	-2.57	1981	57.42	33	-3.92
1982	87.65	24	-1.53	1982	58.19	30	-3.15
1983	89.32	16	+0.14	1983	63.84	7	+2.50
1984	84.03	31	-5.15	1984	59.58	25	-1.76
1985	86.52	26	-2.66	1985	62.16	12	+0.82
1986	86.39	27	-2.79	1986	59.16	26	-2.18

Range T: Hi - Low = 14.13 deg.

Range T: Hi - Low = 9.03 deg.

NOTE: \* = Numerical position tie. Each has same total degrees.

**TABLE B-16. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

November

<u>Max Temp 33-Yr Avg = 76.42</u>				<u>Min Temp 33-Yr Avg = 49.45</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	81.80	1	+5.38	1954	51.03	11	+1.58
1955	75.97	21	-0.45	1955	49.03	*18	-0.42
1956	77.40	13	+0.98	1956	45.33	33	-4.12
1957	71.50	33	-4.92	1957	47.43	26	-2.02
1958	76.97	14	+0.55	1958	48.17	21	-1.28
1959	79.10	7	+2.68	1959	50.77	13	+1.32
1960	76.50	17	+0.08	1960	48.67	20	-0.78
1961	72.83	27	-3.59	1961	46.80	*28	-2.65
1962	80.80	2	+4.38	1962	51.77	4	+2.32
1963	76.26	19	-0.16	1963	51.60	5	+2.15
1964	71.53	32	-4.89	1964	46.13	31	-3.32
1965	76.53	16	+0.11	1965	53.53	2	+4.08
1966	78.10	9	+1.68	1966	51.07	10	+1.62
1967	80.60	* 4	+4.18	1967	53.87	1	+4.42
1968	76.73	15	+0.31	1968	50.97	12	+1.52
1969	75.00	24	-1.42	1969	53.47	3	+4.02
1970	77.43	12	+1.01	1970	49.63	16	+0.18
1971	74.23	26	-2.19	1971	46.97	27	-2.48
1972	71.63	31	-4.79	1972	46.73	30	-2.72
1973	75.73	22	-0.69	1973	46.80	*28	-2.65
1974	77.73	11	+1.31	1974	48.03	24	-1.42
1975	78.00	10	+1.58	1975	47.90	25	-1.55
1976	78.47	8	+2.05	1976	49.03	*18	-0.48
1977	80.60	* 4	+4.18	1977	51.17	9	+1.72
1978	72.73	28	-3.69	1978	51.53	* 6	+2.08
1979	75.60	23	-0.82	1979	46.03	32	-3.42
1980	79.93	6	+3.51	1980	49.10	17	-0.35
1981	80.73	3	+4.31	1981	50.40	14	+0.95
1982	72.63	29	-3.79	1982	49.80	15	+0.35
1983	76.07	29	-3.79	1983	51.53	* 6	+2.08
1984	74.57	25	-1.85	1984	48.07	23	-1.38
1985	71.70	30	-4.72	1985	48.10	22	-1.35
1986	76.47	18	+0.05	1986	51.43	8	+1.98

Range T: Hi - Low = 10.30 deg.

Range T: Hi - Low = 8.54 deg.

NOTE: \* - Numerical position tie. Each has same total degrees.

**TABLE B-17. MONTHLY AVERAGE MAXIMUM AND MINIMUM TEMPERATURES  
RANKED WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

December

<u>Max Temp 33-Yr Avg - 67.99</u>				<u>Min Temp 33-Yr Avg - 42.83</u>			
<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>	<u>Year</u>	<u>Avg</u>	<u>Rank</u>	<u>+ or - 33-Yr Avg</u>
1954	67.68	19	-0.31	1954	43.39	*15	+0.56
1955	70.67	6	+2.68	1955	44.61	9	+1.78
1956	70.45	10	+2.46	1956	40.74	26	-2.09
1957	70.48	9	+2.49	1957	44.00	11	+1.17
1958	75.13	2	+7.14	1958	42.94	18	+0.11
1959	66.19	22	-1.80	1959	44.84	7	+2.01
1960	67.61	20	-0.38	1960	39.68	30	-3.15
1961	65.48	25	-2.51	1961	42.61	19	-0.22
1962	70.58	8	+2.59	1962	45.10	5	+2.27
1963	70.16	11	+2.17	1963	39.87	29	-2.96
1964	67.58	21	-0.41	1964	43.52	13	+0.69
1965	63.65	29	-4.34	1965	44.87	6	+2.04
1966	68.58	15	+0.59	1966	43.32	17	+0.49
1967	61.90	32	-6.09	1967	42.16	22	-0.67
1968	64.06	28	-3.93	1968	37.52	33	-5.31
1969	67.71	18	-0.28	1969	44.26	10	+1.43
1970	66.00	23	-1.99	1970	42.39	21	-0.44
1971	62.97	30	-5.02	1971	40.10	28	-2.73
1972	64.42	27	-3.57	1972	40.65	27	-2.18
1973	70.65	7	+2.66	1973	42.10	23	-0.73
1974	65.58	24	-2.41	1974	38.48	32	-4.35
1975	68.84	13	+0.85	1975	41.97	24	-0.86
1976	69.58	12	+1.59	1976	39.29	31	-3.54
1977	72.77	3	+4.78	1977	47.19	1	+4.36
1978	61.68	33	-6.31	1978	41.13	25	-1.70
1979	72.74	4	+4.75	1979	43.39	*15	+0.56
1980	75.77	1	+7.78	1980	45.68	4	+2.85
1981	72.67	5	+4.68	1981	44.67	8	+1.84
1982	64.94	26	-3.05	1982	43.94	12	+1.11
1983	68.65	14	+0.66	1983	47.10	2	+4.27
1984	62.45	31	-5.54	1984	46.03	3	+3.20
1985	68.52	16	+0.53	1985	42.42	20	-0.41
1986	67.74	17	-0.25	1986	43.48	14	+0.65

Range T: Hi - Low = 14.09 deg.

Range T: Hi - Low = 9.67 deg.

NOTE: \* - Numerical position tie. Each has same total degrees.



**TABLE B-18. TEMPERATURE RANGES: MAXIMUM AND MINIMUM BY DATE**  
**(PERIOD OF RECORD: 1954 - 1986)**  
**US ARMY YUMA PROVING GROUND, AZ**

January							February						
<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>	<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>
1	81	52	29	55	26	29	1	83	50	33	54	31	23
2	82	51	31	55	29	26	2	86	49	37	56	33	23
3	78	49	29	53	24	29	3	87	52	35	57	29	28
4	78	46	32	50	29	21	4	88	49	39	56	28	28
5	78	47	31	55	29	26	5	87	54	33	56	31	25
6	78	*45	33	53	27	26	6	88	58	30	56	33	23
7	82	49	33	53	25	28	7	90	59	31	60	33	27
8	82	52	30	54	*23	31	8	86	55	31	57	37	20
9	79	56	23	#58	26	32	9	81	57	24	60	37	23
10	77	58	19	54	25	29	10	85	*52	33	59	33	26
11	78	53	25	#58	30	28	11	87	56	31	#64	33	31
12	81	47	34	54	25	29	12	88	59	29	61	35	26
13	77	*45	32	57	28	27	13	89	60	29	58	34	24
14	79	55	24	54	26	28	14	91	60	31	56	35	21
15	78	52	26	56	28	28	15	87	63	24	59	*26	33
16	82	53	29	55	28	27	16	88	57	31	57	38	19
17	82	55	27	57	31	26	17	87	58	29	63	29	34
18	85	56	29	57	31	26	18	89	62	27	60	34	26
19	#89	51	38	54	35	19	19	91	54	37	56	34	22
20	86	53	33	56	28	28	20	88	57	31	55	33	22
21	79	55	24	56	30	26	21	88	55	33	57	34	23
22	77	58	19	52	31	21	22	88	58	30	60	32	28
23	77	56	21	57	32	25	23	88	62	26	60	36	24
24	76	54	22	56	31	25	24	#93	59	34	57	37	20
25	79	56	23	57	30	27	25	90	62	28	57	30	27
26	81	57	24	56	30	26	26	90	60	30	60	37	23
27	82	57	25	55	32	23	27	88	55	33	60	33	27
28	84	51	33	54	33	19	28	90	59	31	61	30	31
29	84	51	33	55	33	22	29	84	58	26	56	40	14
30	83	53	30	55	31	24							
31	84	48	36	55	36	18							

Range: 89 - 45 = 44    58 - 23 = 35

Range: 93 - 52 = 41    64 - 26 = 38

HI MAX - LO MIN: 89 - 23 = 66 deg.

HI MAX - LO MIN: 93 - 26 = 67 deg.

NOTE: # - Highest temperature in the HI columns.

\* - Lowest temperature in the LO columns.

**TABLE B-19. TEMPERATURE RANGES: MAXIMUM AND MINIMUM BY DATE**  
**(PERIOD OF RECORD: 1954 - 1986)**  
**US ARMY YUMA PROVING GROUND, AZ**

March							April						
<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>	<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>
1	89	*57	32	59	35	24	1	98	67	31	63	40	23
2	86	59	27	57	36	21	2	98	68	30	64	43	21
3	86	58	28	55	35	20	3	100	63	37	65	*37	28
4	92	62	30	57	35	22	4	103	65	38	65	42	23
5	95	59	36	60	38	22	5	97	69	28	62	43	19
6	93	62	31	58	38	20	6	97	68	29	#71	45	26
7	91	61	30	60	37	23	7	97	66	31	64	44	20
8	91	62	29	63	35	28	8	100	69	31	65	42	23
9	95	61	34	60	*32	28	9	97	*56	41	66	44	22
10	95	63	32	64	40	24	10	95	65	30	66	43	23
11	91	64	27	60	39	21	11	97	65	32	68	46	22
12	92	63	29	58	40	18	12	100	64	36	67	44	23
13	90	64	26	60	32	28	13	103	69	34	65	44	21
14	90	62	28	63	39	24	14	#104	62	42	66	50	26
15	93	65	28	59	34	25	15	102	69	33	67	44	23
16	92	65	27	59	38	21	16	103	63	40	69	44	25
17	94	62	32	64	43	21	17	#104	66	38	68	42	26
18	91	63	28	60	38	22	18	#104	67	37	69	46	23
19	91	63	28	62	40	22	19	101	69	32	67	45	22
20	93	62	31	61	42	19	20	103	70	33	70	48	22
21	93	65	28	#66	43	23	21	#104	67	37	67	46	21
22	92	65	27	62	38	24	22	101	68	33	67	43	24
23	91	69	22	60	43	17	23	99	70	29	68	44	24
24	91	64	27	61	45	16	24	97	71	26	68	49	19
25	92	65	27	58	41	17	25	98	70	28	#71	47	24
26	95	62	33	63	39	24	26	98	69	29	67	49	18
27	92	65	27	64	43	21	27	100	70	30	68	47	21
28	94	61	33	62	45	17	28	98	65	33	69	46	23
29	#98	63	35	64	44	20	29	102	69	33	70	44	26
30	97	69	28	61	42	19	30	100	74	26	70	49	21
31	97	70	27	62	44	18							

Range: 98 - 57 = 41    66 - 32 = 34

Range: 104 - 56 = 48    71 - 37 = 34

HI MAX - LO MIN: 98 - 32 = 66 deg.

HI MAX - LO MIN: 104 - 37 = 67 deg.

NOTE: # = Highest temperature in the HI columns.  
 \* = Lowest temperature in the LO columns.

**TABLE B-20. TEMPERATURE RANGES: MAXIMUM AND MINIMUM BY DATE  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

May							June						
<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>	<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>
1	101	73	28	71	47	26	1	110	82	28	74	56	18
2	103	73	30	69	49	20	2	112	85	27	79	57	22
3	103	76	27	72	52	20	3	112	84	28	83	57	26
4	100	*67	33	72	51	21	4	111	91	20	82	59	23
5	105	70	35	70	*46	24	5	114	87	27	80	59	21
6	104	71	33	70	48	22	6	111	81	30	79	62	17
7	103	72	31	72	52	20	7	115	84	31	79	59	20
8	101	76	25	74	50	24	8	115	87	28	80	60	20
9	104	79	25	72	54	18	9	114	84	30	81	59	22
10	106	77	29	75	51	24	10	111	84	27	77	60	17
11	110	77	33	72	48	24	11	114	85	29	76	57	19
12	106	75	31	73	51	22	12	113	88	25	81	61	20
13	108	80	28	75	49	26	13	114	85	29	83	62	21
14	107	75	32	76	54	22	14	117	82	35	85	61	24
15	103	75	28	74	50	24	15	116	*80	36	81	*54	27
16	108	80	28	77	53	24	16	115	85	30	83	58	25
17	109	79	30	75	52	23	17	114	88	26	82	61	21
18	106	83	23	81	55	26	18	115	89	26	82	61	21
19	108	78	30	78	53	25	19	115	91	24	82	60	22
20	106	76	30	78	52	26	20	116	89	27	83	60	23
21	108	76	32	76	52	24	21	115	95	20	84	63	21
22	106	79	27	75	53	22	22	117	98	19	#87	64	23
23	108	77	31	79	56	23	23	115	94	21	85	64	21
24	107	76	31	76	52	24	24	#118	96	22	#87	62	25
25	109	80	29	76	52	24	25	115	95	20	85	67	18
26	110	81	29	76	55	21	26	115	87	28	85	59	26
27	112	76	36	81	54	27	27	117	97	20	86	65	21
28	#117	70	47	79	55	24	28	115	99	16	85	66	19
29	113	80	33	81	53	28	29	115	98	17	84	67	17
30	108	84	24	#83	58	25	30	113	100	13	85	69	16
31	108	82	26	76	57	19							

Range: 117 - 67 = 50    83 - 46 = 37

Range: 118 - 80 = 38    87 - 54 = 33

HI MAX - LO MIN: 117 - 46 = 71 deg.

HI MAX - LO MIN: 118 - 54 = 64 deg.

NOTE: # - Highest temperature in the HI columns.  
\* - Lowest temperature in the LO columns.

**TABLE B-21. TEMPERATURE RANGES: MAXIMUM AND MINIMUM BY DATE**  
**(PERIOD OF RECORD: 1954 - 1986)**  
**US ARMY YUMA PROVING GROUND, AZ**

July							August						
<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>	<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>
1	115	95	20	84	*65	19	1	115	94	21	89	75	14
2	116	98	18	89	67	22	2	114	95	19	89	71	18
3	115	98	17	86	68	18	3	115	99	16	90	73	17
4	116	100	16	90	68	22	4	116	95	21	88	70	18
5	114	95	19	88	67	21	5	113	90	23	87	67	20
6	115	*84	31	85	69	16	6	112	93	19	89	70	19
7	114	94	20	85	69	16	7	113	94	19	89	73	16
8	117	90	27	85	71	14	8	112	100	12	87	72	15
9	#118	101	17	86	73	13	9	111	92	21	89	73	16
10	115	100	15	87	71	16	10	112	97	15	89	74	15
11	117	95	22	86	71	15	11	114	94	20	88	73	15
12	116	101	15	87	71	16	12	113	83	30	85	67	18
13	114	99	15	90	68	22	13	113	97	16	89	71	18
14	114	96	18	90	73	17	14	112	96	16	87	69	18
15	113	92	21	#91	70	21	15	111	94	17	86	68	18
16	117	96	21	89	69	20	16	112	89	23	86	67	19
17	114	96	18	88	70	18	17	110	89	21	86	70	16
18	116	96	20	87	75	12	18	114	*82	32	88	68	20
19	116	92	24	88	73	15	19	112	88	24	86	68	18
20	110	91	24	88	73	15	20	113	93	20	85	67	18
21	150	97	15	90	74	16	21	115	90	25	89	71	18
22	120	90	24	87	74	13	22	115	93	22	#91	68	23
23	140	92	21	88	70	18	23	115	88	27	88	66	22
24	130	90	25	89	71	18	24	111	92	21	90	69	21
25	156	100	14	87	75	12	25	#118	87	31	87	67	20
26	114	96	17	88	76	12	26	115	97	18	85	66	19
27	113	94	22	88	75	13	27	#118	97	21	84	68	16
28	116	30	23	90	75	15	28	115	99	16	89	69	20
29	112	94	18	#91	76	15	29	116	95	21	87	69	18
30	115	98	17	90	68	22	30	115	93	22	87	68	19
31	#118	93	25	88	76	12	31	110	94	16	85	*65	20

Range: 118 - 84 = 34    91 - 65 = 26

Range: 118 - 82 = 36    91 - 65 = 26

HI MAX - LO MIN: 118 - 65 = 53 deg.

HI MAX - LO MIN: 118 - 65 = 53 deg.

NOTE: # = Highest temperature in the HI columns.

\* = Lowest temperature in the LO columns.

**TABLE B-22. TEMPERATURE RANGES: MAXIMUM AND MINIMUM BY DATE**  
**(PERIOD OF RECORD: 1954 - 1986)**  
**US ARMY YUMA PROVING GROUND, AZ**

September							October						
<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>	<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>
1	114	82	22	#91	67	24	1	111	72	39	#76	56	20
2	114	77	37	86	68	18	2	#112	80	32	#76	54	22
3	111	84	27	85	69	16	3	105	82	23	75	56	19
4	112	86	26	85	65	20	4	105	79	26	#76	54	22
5	110	88	22	84	65	19	5	106	81	25	75	53	22
6	112	82	30	83	66	17	6	106	73	33	#76	56	20
7	112	89	23	84	64	20	7	106	84	22	74	58	16
8	114	92	22	85	69	16	8	103	72	31	75	55	20
9	#115	91	24	85	66	19	9	102	77	25	76	47	29
10	112	88	24	86	68	18	10	101	76	25	73	47	26
11	112	84	28	85	63	22	11	104	77	27	72	50	22
12	114	91	23	85	*54	31	12	105	77	28	75	52	23
13	112	90	22	84	58	26	13	104	74	30	72	49	23
14	110	90	20	84	62	22	14	105	77	28	71	47	24
15	107	93	14	83	63	20	15	104	74	30	74	49	25
16	109	84	25	81	62	19	16	103	70	33	69	46	23
17	113	86	27	81	64	17	17	103	67	36	71	44	27
18	113	79	34	82	*54	28	18	100	68	32	69	49	20
19	111	81	30	84	57	27	19	99	73	26	68	47	21
20	107	83	24	82	55	27	20	96	70	26	71	52	19
21	109	89	20	80	59	21	21	96	74	22	68	52	16
22	110	86	24	82	62	20	22	96	71	25	72	49	23
23	110	87	23	82	58	24	23	101	73	28	72	51	21
24	108	84	24	82	61	21	24	102	77	31	67	45	21
25	111	84	27	83	62	21	25	99	61	32	68	44	24
26	111	86	25	79	62	17	26	99	73	26	68	43	25
27	107	83	24	80	61	19	27	99	71	28	65	50	15
28	107	84	23	79	58	21	28	96	71	25	65	51	14
29	106	*76	30	80	60	20	29	96	*58	38	66	43	23
30	105	80	25	79	57	22	30	96	63	33	71	38	33
							31	95	61	34	69	*36	33

Range: 115 - 76 = 39    91 - 54 = 37

Range: 112 - 58 = 54    76 - 36 = 40

HI MAX - LO MIN: 115 - 54 = 61 deg.

HI MAX - LO MIN: 112 - 36 = 76 deg.

NOTE: # - Highest temperature in the HI columns.

\* - Lowest temperature in the LO columns.

**TABLE B-23. TEMPERATURE RANGES: MAXIMUM AND MINIMUM BY DATE**  
**(PERIOD OF RECORD: 1954 - 1986)**  
**US ARMY YUMA PROVING GROUND, AZ**

November							December						
<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>	<u>Date</u>	<u>Hi</u> <u>Max</u>	<u>Lo</u> <u>Max</u>	<u>Range</u>	<u>Hi</u> <u>Min</u>	<u>Lo</u> <u>Min</u>	<u>Range</u>
1	94	69	25	64	41	23	1	81	60	21	53	38	15
2	90	67	23	64	42	22	2	83	61	22	55	37	18
3	94	65	29	61	42	19	3	#84	58	26	58	37	21
4	93	68	25	61	40	21	4	82	55	27	61	37	24
5	#95	69	26	61	41	20	5	81	59	22	61	36	25
6	91	67	24	64	44	20	6	82	51	31	69	34	35
7	91	67	24	62	46	16	7	80	49	31	55	33	22
8	91	70	21	60	46	14	8	80	47	33	57	28	28
9	92	66	26	61	43	24	9	82	50	32	58	30	28
10	90	62	28	#67	40	27	10	80	49	31	53	31	22
11	92	65	27	51	40	21	11	80	49	31	56	21	25
12	93	59	34	52	42	20	12	82	51	31	51	38	23
13	89	61	28	54	40	24	13	79	51	28	51	32	19
14	88	60	28	53	41	22	14	79	*42	37	51	31	20
15	88	*50	38	50	40	20	15	80	44	36	54	30	24
16	90	54	36	59	35	24	16	82	51	31	52	32	20
17	84	58	26	51	*31	30	17	80	53	27	54	33	21
18	86	51	35	52	35	27	18	80	54	26	54	34	20
19	83	58	25	58	35	23	19	78	57	21	49	33	16
20	83	62	21	57	33	24	20	79	53	26	52	35	17
21	84	62	22	54	*31	33	21	78	50	28	53	29	24
22	85	63	22	58	40	18	22	78	52	26	53	*26	27
23	86	56	30	53	39	24	23	80	55	25	55	32	23
24	86	59	27	52	36	26	24	81	53	28	52	30	22
25	86	61	25	56	38	18	25	77	52	25	57	31	26
26	88	61	27	51	37	24	26	81	54	27	54	32	22
27	85	60	25	56	35	21	27	81	52	29	56	30	26
28	85	55	30	55	37	18	28	81	55	26	55	30	25
29	82	60	22	56	*31	25	29	#84	55	29	54	*26	28
30	80	60	20	53	36	17	30	83	47	36	57	33	24
							31	78	52	26	51	29	22

Range: 95 - 50 = 45    67 - 31 = 36

Range: 84 - 42 = 42    69 - 26 = 43

HI MAX - LO MIN: 95 - 31 = 64 deg.

HI MAX - LO MIN: 84 - 26 = 58 deg.

NOTE: # = Highest temperature in the HI columns.  
 \* = Lowest temperature in the LO columns.

**TABLE B-24. DAILY AVERAGE MAXIMUM TEMPERATURES BY SEASON**  
**21 MARCH 1954 THROUGH 20 MARCH 1987**  
**(RANKED FROM WARMEST TO COOLEST)**  
**US ARMY YUMA PROVING GROUND, AZ**

<u>Pos</u>	Spring	Summer	Autumn	Winter
	21 Mar-20 Jun Yr (Deg)F	21 Jun-20 Sep Yr (Deg)F	21 Sep-20 Dec Yr (Deg)F	21 Dec-20 Mar Yr (Deg)F
1	85 - 93.65	62 - 107.54	77 - 85.64	(85-86) - 75.49
2	86 - 93.23	81 - 107.45	80 - 85.22	(71-72) - 75.34
3	60 - 93.22	60 - 106.83	54 - 85.12	(80-81) - 74.41
4	59 - 93.02	80 - 106.38	79 - 84.77	(60-61) - 74.12
5	54 - 92.96	58 - 106.37	62 - 84.69	(83-84) - 73.71
6	78 - 92.90	56 - 106.04	58 - 84.64	(58-59) - 73.33
7	81 - 92.77	79 - 106.00	81 - 83.25	(79-80) - 73.16
8	66 - 92.68	57 - 105.41	56 - 83.09	(56-57) - 72.17
9	74 - 92.51	54 - 105.24	66 - 82.85	(76-77) - 71.78
10	84 - 92.46	69 - 105.16	63 - 82.65	(75-76) - 71.67
11	58 - 91.99	74 - 105.11	59 - 82.58	(55-56) - 71.56
12	68 - 91.87	77 - 105.05	55 - 82.55	(66-67) - 71.50
13	62 - 91.74	75 - 105.00	73 - 82.44	(70-71) - 71.26
14	56 - 91.67	*70 - 104.93	65 - 82.38	(73-74) - 71.18
15	72 - 91.34	*73 - 104.93	75 - 82.32	(86-87) - 71.16
16	61 - 91.23	59 - 104.92	74 - 81.99	(81-82) - 70.94
17	69 - 91.07	78 - 104.78	67 - 81.75	(57-58) - 70.91
18	79 - 90.43	83 - 104.54	76 - 81.57	(67-68) - 70.87
19	76 - 90.36	*86 - 104.40	68 - 81.25	(82-83) - 70.73
20	73 - 89.96	*64 - 104.40	*83 - 81.09	(62-63) - 70.56
21	77 - 89.50	85 - 104.29	*60 - 81.09	(77-78) - 70.19
22	57 - 89.28	66 - 104.15	64 - 80.51	(69-70) - 70.16
23	63 - 89.02	63 - 104.02	78 - 80.36	(74-75) - 70.10
24	82 - 88.91	61 - 104.01	70 - 80.03	(64-65) - 69.98
25	70 - 88.72	71 - 103.74	69 - 79.84	(61-62) - 69.20
26	80 - 88.70	72 - 103.68	82 - 79.15	(63-64) - 68.7
27	55 - 88.68	67 - 103.67	57 - 79.01	(59-60) - 68.6
28	64 - 88.55	84 - 103.41	61 - 78.69	(68-69) - 68.2
29	83 - 88.40	76 - 103.18	86 - 78.52	(72-73) - 68.0
30	71 - 88.23	68 - 103.08	85 - 78.00	(84-85) - 67.8
31	65 - 87.21	55 - 102.78	84 - 77.73	(65-66) - 67.6
32	75 - 86.61	82 - 102.64	72 - 75.71	(78-79) - 66.7
33	67 - 85.55	65 - 102.60	71 - 75.63	(54-55) - 66.5
AVG	90.56	104.72	81.40	70.8
RANGE	8.10	4.94	10.01	8.9

NOTE: \* - Numerical position tie. Total degrees exactly the same.

**TABLE B-25. DAILY AVERAGE MINIMUM TEMPERATURES BY SEASON**  
**21 MARCH 1954 THROUGH 20 MARCH 1987**  
**(RANKED FROM WARMEST TO COOLEST)**  
**US ARMY YUMA PROVING GROUND, AZ**

Pos	Spring	Summer	Autumn	Winter
	21 Mar-20 Jun	21 Jun-20 Sep	21 Sep-20 Dec	21 Dec-20 Mar
	Yr (Deg)F	Yr (Deg)F	Yr (Deg)F	Yr (Deg)F
1	66 - 64.08	70 - 81.02	78 - 56.91	(77-78) - 49.56
2	85 - 63.84	69 - 80.90	83 - 56.87	(80-81) - 49.02
3	78 - 63.61	71 - 80.55	54 - 56.75	(79-80) - 48.70
4	58 - 63.50	67 - 80.49	*77 - 56.21	(85-86) - 48.21
5	60 - 63.38	81 - 80.18	*63 - 56.21	(67-68) - 47.82
6	86 - 63.24	59 - 79.65	@67 - 56.12	(82-83) - 47.62
7	59 - 63.02	58 - 79.51	@65 - 56.12	(56-57) - 47.58
8	72 - 62.92	66 - 79.50	66 - 55.86	(83-84) - 47.18
9	*81 - 62.88	60 - 79.41	62 - 55.79	(64-65) - 45.79
10	*56 - 62.88	84 - 79.23	69 - 55.40	(69-70) - 45.71
11	84 - 62.66	77 - 79.15	58 - 55.37	(84-85) - 45.60
12	69 - 62.50	57 - 78.91	55 - 55.01	(86-87) - 45.53
13	54 - 62.07	56 - 78.89	80 - 54.64	(57-58) - 45.40
14	68 - 61.89	78 - 78.80	64 - 54.62	(60-61) - 45.39
15	74 - 61.68	55 - 78.78	59 - 54.57	(81-82) - 45.31
16	79 - 61.60	86 - 78.70	74 - 54.32	(75-76) - 45.22
17	63 - 61.34	63 - 78.60	84 - 54.26	(78-79) - 44.98
18	*61 - 61.03	62 - 78.48	57 - 54.22	(71-72) - 44.70
19	*57 - 61.03	64 - 78.46	81 - 53.99	(68-69) - 44.57
20	65 - 60.65	83 - 78.39	85 - 53.91	(61-62) - 44.36
21	73 - 60.59	54 - 78.28	79 - 53.89	(62-63) - 44.33
22	76 - 60.40	74 - 78.18	82 - 53.60	(58-59) - 44.20
23	*70 - 60.36	61 - 77.95	70 - 53.45	(73-74) - 44.11
24	*55 - 60.36	72 - 77.88	86 - 53.30	(72-73) - 44.02
25	82 - 60.11	85 - 77.60	76 - 53.27	(59-60) - 43.82
26	71 - 59.86	68 - 77.59	68 - 53.08	(66-67) - 43.63
27	62 - 59.76	80 - 77.30	60 - 53.03	(55-56) - 43.33
28	80 - 59.49	82 - 77.17	56 - 52.80	(65-66) - 43.32
29	83 - 59.12	65 - 77.03	72 - 52.79	(54-55) - 43.00
30	*77 - 58.91	73 - 76.96	73 - 52.56	(76-77) - 42.78
31	*67 - 58.91	75 - 76.89	75 - 52.55	(70-71) - 42.72
32	64 - 58.85	79 - 76.57	61 - 51.99	(74-75) - 41.87
33	75 - 58.15	76 - 75.96	71 - 50.54	(63-64) - 40.14
AVG	61.35	78.58	54.36	45.14
RANGE	5.93	5.06	6.37	9.42

NOTE: \* and @ - Numerical position tie. Total degrees exactly the same.  
The \* and @ show a different position tie on 4 adjacent entries.



**TABLE B-26. DAILY AVERAGE TEMPERATURES BY SEASON**  
**21 MARCH 1954 THROUGH 20 MARCH 1987**  
**(RANKED FROM WARMEST TO COOLEST)**  
**US ARMY YUMA PROVING GROUND, AZ**

Pos	Spring	Summer	Autumn	Winter
	21 Mar-20 Jun Yr (Deg)F	21 Jun-20 Sep Yr (Deg)F	21 Sep-20 Dec Yr (Deg)F	21 Dec-20 Mar Yr (Deg)F
1	86 - 80.07	81 - 94.05	54 - 70.92	*(85-86) - 61.59
2	85 - 80.04	69 - 93.30	77 - 70.57	*(80-81) - 61.59
3	58 - 79.33	60 - 93.29	58 - 70.25	(83-84) - 60.78
4	66 - 79.26	62 - 93.25	62 - 70.14	(79-80) - 60.73
5	78 - 79.03	70 - 93.09	80 - 69.81	(71-72) - 60.20
6	81 - 78.74	80 - 92.91	79 - 69.68	(56-57) - 60.14
7	84 - 78.55	58 - 92.71	66 - 69.41	(67-68) - 59.43
8	60 - 78.51	59 - 92.50	63 - 69.16	(77-78) - 59.33
9	59 - 78.33	56 - 92.48	65 - 68.79	(60-61) - 59.32
10	72 - 78.26	57 - 92.45	*59 - 68.78	(55-56) - 59.08
11	74 - 78.17	67 - 92.39	*55 - 68.78	(58-59) - 59.02
12	54 - 77.64	77 - 92.34	83 - 68.75	(82-83) - 58.80
13	69 - 77.62	71 - 92.33	81 - 68.58	(75-76) - 58.65
14	56 - 77.48	*78 - 92.32	67 - 68.34	(57-58) - 58.26
15	68 - 77.25	*74 - 92.32	78 - 68.29	(86-87) - 58.07
16	61 - 77.21	66 - 92.24	74 - 68.19	(73-74) - 57.96
17	76 - 76.67	86 - 91.96	56 - 67.93	(62-63) - 57.83
18	79 - 76.52	79 - 91.91	63 - 67.70	(81-82) - 57.77
19	73 - 76.01	64 - 91.88	76 - 67.65	(64-65) - 57.73
20	62 - 76.00	54 - 91.77	69 - 67.38	(66-67) - 57.58
21	63 - 75.87	75 - 91.74	60 - 67.34	(69-70) - 57.54
22	70 - 75.66	83 - 91.60	75 - 67.23	(76-77) - 57.46
23	77 - 75.55	63 - 91.58	68 - 67.04	(61-62) - 57.02
24	57 - 75.32	72 - 91.42	57 - 66.81	(70-71) - 56.52
25	82 - 75.12	73 - 91.40	70 - 66.29	(59-60) - 56.47
26	83 - 75.02	85 - 91.39	82 - 66.24	(84-85) - 56.31
27	80 - 74.90	61 - 91.25	84 - 66.08	(74-75) - 56.22
28	71 - 74.87	84 - 91.23	86 - 65.67	(68-69) - 56.21
29	65 - 74.65	55 - 90.76	61 - 65.59	(72-73) - 55.74
30	55 - 74.63	65 - 90.40	64 - 65.57	(78-79) - 55.50
31	64 - 74.35	68 - 90.32	85 - 65.47	(65-66) - 55.29
32	75 - 73.36	(x)76 - 90.30	72 - 64.12	(54-55) - 54.99
33	67 - 72.96	(x)82 - 90.30	71 - 62.98	(64-65) - 54.37
AVG	76.76	91.98	67.80	57.94
RANGE	7.11	3.75	7.94	7.22

NOTE: \* - Numerical position tie.

(x) - Tied at two decimal places but not tied at 3 decimal places.

**TABLE B-27. AVERAGE DAILY MAXIMUM TEMPERATURES  
ACTUAL OCCURRENCES BY DATE AND MONTH  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month</u> <u>Date</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
1	#2	1	0	0	0	0	3	4	5	3	3	1
2	#1	2	1	0	3	1	2	6	3	1	1	1
3	#1	2	2	2	2	1	2	2	2	1	0	0
4	2	3	0	2	0	5	3	5	0	2	1	4
5	3	3	1	2	3	4	5	1	5	2	4	1
6	2	3	1	2	2	2	2	3	2	5	1	3
7	1	1	0	1	1	1	1	2	4	2	3	3
8	1	1	1	3	4	1	3	2	2	4	1	3
9	0	1	1	0	2	3	1	4	3	1	1	1
10	1	0	2	3	0	0	5	5	3	2	1	0
11	3	3	1	4	5	3	3	0	4	0	6	3
12	1	2	0	0	0	0	1	3	3	0	2	3
13	4	1	1	1	2	3	1	4	4	1	1	3
14	4	2	2	0	1	1	2	4	3	2	2	1
15	3	3	0	0	3	2	5	4	2	3	0	3
16	3	1	2	1	3	0	5	5	4	1	1	1
17	1	4	2	1	3	2	3	3	2	1	2	3
18	0	1	0	3	1	3	3	3	1	0	0	2
19	2	3	5	#2	0	2	2	4	2	3	1	3
20	1	1	1	0	1	1	6	1	5	1	0	2
21	1	2	1	0	3	1	2	3	1	2	2	2
22	2	3	1	2	1	4	3	3	1	2	3	0
23	2	1	3	1	3	0	5	1	3	1	2	2
24	2	3	1	1	2	0	2	6	2	2	3	5
25	1	3	0	3	2	2	4	3	0	1	0	5
26	5	3	1	2	1	2	4	3	1	2	4	3
27	2	0	2	0	2	1	5	4	2	3	4	2
28	2	2	1	3	0	2	3	2	0	1	2	3
29	1	*0	2	1	4	4	5	3	1	1	2	1
30	0	-	2	1	5	1	1	5	3	1	1	1
31	2	-	4	-	1	-	5	5	-	0	-	#1

SUMMARY: Total observations - 12048 Hits - 747 Percentage - 6.2

<u>Mo</u>	<u>Obs</u>	<u>Hits</u>	<u>%</u>	<u>Mo</u>	<u>Obs</u>	<u>Hits</u>	<u>%</u>	<u>Mo</u>	<u>Obs</u>	<u>Hits</u>	<u>%</u>
Jan	1020	65	6.4	Feb	932	59	6.3	Mar	1023	83	8.1
Apr	989	74	7.5	May	1023	77	7.5	Jun	990	72	7.3
Jul	1022	89	8.7	Aug	1022	78	7.6	Sep	990	64	6.5
Oct	1023	78	7.6	Nov	990	63	6.4	Dec	1022	75	7.3

NOTE: \* - February has 8 years on this date.  
# - 32 years of record.

**TABLE B-28. AVERAGE DAILY MINIMUM TEMPERATURES  
ACTUAL OCCURRENCES BY DATE AND MONTH  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month</u> <u>Date</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
1	#1	0	2	1	2	1	5	1	2	5	1	6
2	#4	0	3	3	4	2	0	3	4	1	4	3
3	#2	0	1	2	3	2	1	2	0	2	2	1
4	2	2	2	2	4	2	#0	#2	4	1	0	5
5	1	4	2	3	4	1	1	2	3	3	3	2
6	1	3	2	2	3	3	2	6	5	3	4	0
7	3	3	1	2	1	2	2	3	0	3	2	2
8	3	1	5	2	1	7	4	5	3	2	1	1
9	0	0	4	4	4	1	3	1	2	4	3	1
10	3	1	5	2	4	4	4	2	0	3	6	3
11	3	3	2	4	2	6	4	3	2	4	7	1
12	3	2	5	2	1	3	1	3	1	3	1	2
13	0	2	3	4	0	1	3	4	2	1	3	1
14	0	3	1	2	2	2	4	5	1	3	1	2
15	1	3	1	4	3	4	5	2	3	0	2	2
16	3	1	1	4	3	4	3	2	2	2	0	3
17	2	6	2	1	2	0	4	3	1	1	3	4
18	3	1	1	1	5	4	1	2	1	1	1	4
19	3	2	3	#1	1	2	4	2	0	3	3	2
20	3	2	5	2	1	2	2	4	0	3	1	2
21	0	3	3	6	3	2	4	3	1	1	0	5
22	2	0	5	2	2	2	4	3	2	0	0	1
23	2	4	7	1	1	2	4	2	4	2	2	3
24	2	1	1	3	0	2	2	2	4	5	1	0
25	4	2	1	4	4	2	4	3	3	4	2	0
26	6	3	3	2	4	4	4	1	1	5	2	5
27	1	1	2	2	3	0	2	2	5	3	3	3
28	4	6	1	3	3	2	2	2	4	5	2	4
29	2	*0	3	1	2	1	1	2	3	1	1	0
30	1	-	5	2	3	2	5	0	1	3	2	2
31	0	-	1	-	2	-	4	1	-	1	-	#5

SUMMARY: Total observations - 12046 Hits - 877 Percentage - 7.3

<u>Mo</u>	<u>Obs</u>	<u>Hits</u>	<u>%</u>	<u>Mo</u>	<u>Obs</u>	<u>Hits</u>	<u>%</u>	<u>Mo</u>	<u>Obs</u>	<u>Hits</u>	<u>%</u>
Jan	1020	56	5.5	Feb	923	55	5.9	Mar	1020	41	4.0
Apr	989	41	4.1	May	1023	59	5.8	Jun	990	52	5.3
Jul	1023	97	9.5	Aug	1023	103	10.1	Sep	990	73	7.4
Oct	1023	51	5.0	Nov	990	53	5.4	Dec	1022	66	6.5

NOTE: \* - February has 8 years on this date.  
# - 32 years of record.

**TABLE B-29. ANNUAL AVERAGE DAILY TEMPERATURES  
RANKED FROM WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

The 33-year average daily temperature was 73.73 degrees fahrenheit.

<u>Year</u>	<u>Avg Temp</u>	<u>Rank</u>	<u>+ or - 33-yr avg</u>	<u>Year</u>	<u>Avg Temp</u>	<u>Rank</u>	<u>+ or - 33-yr avg</u>
1954	75.01	3	+ 1.28	1971	71.93	33	- 1.80
1955	72.71	29	- 1.02	1972	73.54	21	- 0.19
1956	73.75	15	+ 0.02	1973	72.80	28	- 0.93
1957	73.82	16	+ 0.09	1974	74.09	11	+ 0.36
1958	75.22	2	+ 1.49	1975	72.43	30	- 1.30
1959	74.70	6	+ 0.97	1976	73.27	24	- 0.46
1960	74.05	12	+ 0.32	1977	74.28	8	+ 0.55
1961	73.74	22	+ 0.01	1978	74.63	7	+ 0.90
1962	74.12	9	+ 0.39	1979	73.66	19	- 0.07
1963	73.77	18	+ 0.04	1980	74.88	5	+ 1.15
1964	72.16	32	- 1.57	1981	75.56	1	+ 1.83
1965	72.82	27	- 0.91	1982	72.38	31	- 1.35
1966	74.10	10	+ 0.37	1983	73.81	17	+ 0.08
1967	73.04	26	- 0.69	1984	74.01	13	+ 0.28
1968	73.35	23	- 0.38	1985	73.59	20	- 0.14
1969	73.98	14	+ 0.25	1986	74.89	4	+ 1.16
1970	73.14	25	- 0.59				

Range T: 3.63 deg.

**TABLE B-30. MONTHLY AVERAGE DAILY TEMPERATURE  
RANKED FROM WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

January			February			March		
Avg 54.91			59.61			64.29		
<u>Year</u>	<u>Avg Temp</u>	<u>Rank</u>	<u>Year</u>	<u>Avg Temp</u>	<u>Rank</u>	<u>Year</u>	<u>Avg Temp</u>	<u>Rank</u>
1954	55.35	15	1954	65.39	1	1954	62.03	25
1955	51.42	28	1955	54.82	31	1955	64.68	15
1956	57.71	7	1956	53.45	33	1956	65.32	13
1957	55.03	16	1957	64.50	3	1957	65.77	10
1958	56.45	10	1958	61.18	10	1958	60.58	31
1959	57.55	8	1959	57.07	27	1959	66.67	6
1960	51.29	29	1960	56.45	29	1960	67.81	4
1961	58.03	5	1961	61.32	9	1961	64.06	17
1962	55.81	13	1962	58.93	19	1962	59.84	32
1963	50.87	31	1963	65.36	2	1963	63.61	18
1964	50.58	32	1964	54.66	32	1964	61.22	29
1965	56.13	*11	1965	58.54	21	1965	61.97	26
1966	51.13	30	1966	54.86	30	1966	65.94	9
1967	53.65	24	1967	60.43	15	1967	65.48	12
1968	54.35	19	1968	64.14	4	1968	66.06	7
1969	57.94	6	1969	56.61	28	1969	62.84	*22
1970	53.74	23	1970	61.14	13	1970	62.32	24
1971	53.77	22	1971	58.71	20	1971	65.65	11
1972	51.71	27	1972	61.17	*11	1972	72.48	1
1973	51.81	26	1973	58.21	23	1973	59.23	33
1974	54.68	17	1974	59.29	22	1974	66.00	8
1975	54.29	20	1975	57.32	25	1975	61.55	28
1976	56.13	*11	1976	61.17	*11	1976	63.48	*19
1977	54.48	18	1977	61.53	8	1977	60.68	30
1978	55.45	14	1978	60.21	16	1978	68.03	3
1979	50.45	33	1979	57.46	24	1979	63.45	21
1980	59.00	3	1980	63.07	5	1980	62.84	*22
1981	60.35	1	1981	61.68	7	1981	64.77	14
1982	53.90	21	1982	61.04	14	1982	61.71	27
1983	56.94	9	1983	59.39	18	1983	64.65	16
1984	58.61	4	1984	59.93	17	1984	67.55	5
1985	53.48	25	1985	57.21	26	1986	63.48	*19
1986	59.71	2	1986	62.11	6	1986	69.55	2
Range T: 12.37			11.94			11.70 deg.		

NOTE: \* - Numerical position tie. Each has same total degrees.

**TABLE B-31. MONTHLY AVERAGE DAILY TEMPERATURE  
RANKED FROM WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<b>Avg</b>	<b>April</b> 71.23			<b>May</b> 79.25			<b>June</b> 88.29	
<b>Year</b>	<b>Avg</b> <b>Temp</b>	<b>Rank</b>	<b>Year</b>	<b>Avg</b> <b>Temp</b>	<b>Rank</b>	<b>Year</b>	<b>Avg</b> <b>Temp</b>	<b>Rank</b>
1954	76.40	1	1954	80.71	11	1954	86.40	24
1955	68.90	26	1955	76.45	28	1955	85.90	27
1956	70.13	23	1956	79.74	17	1956	89.40	11
1957	70.53	20	1957	74.55	32	1957	90.17	9
1958	72.23	15	1958	85.23	2	1958	88.80	15
1959	75.87	4	1959	46.87	27	1959	91.07	7
1960	72.97	10	1960	78.74	19	1960	91.87	4
1961	72.73	11	1961	77.42	25	1961	90.10	10
1962	76.23	3	1962	75.58	29	1962	86.10	25
1963	67.93	29	1963	81.65	6	1963	84.37	31
1964	69.40	25	1964	77.77	*23	1964	85.70	28
1965	71.10	18	1965	77.26	26	1965	81.80	33
1966	74.43	6	1966	82.74	3	1966	88.37	19
1967	64.03	33	1967	78.58	20	1967	84.67	29
1968	70.80	19	1968	79.90	16	1968	88.20	20
1969	72.33	13	1969	81.87	5	1969	84.03	32
1970	66.90	30	1970	80.90	10	1970	88.60	*16
1971	68.80	27	1971	74.74	31	1971	86.63	23
1972	73.33	* 7	1972	80.13	14	1972	88.60	*16
1973	69.80	24	1973	81.58	7	1973	88.40	18
1974	72.63	12	1974	79.94	15	1974	92.03	3
1975	64.57	32	1975	77.77	*23	1975	86.77	21
1976	68.77	28	1976	81.23	9	1976	89.10	14
1977	73.20	9	1977	73.87	33	1977	90.47	8
1978	70.30	*21	1978	80.39	12	1978	93.50	1
1979	72.27	14	1979	78.39	21	1979	89.37	12
1980	71.63	16	1980	74.97	30	1980	89.33	13
1981	74.60	5	1981	78.84	18	1981	92.53	2
1982	71.23	17	1982	77.84	22	1982	84.50	30
1983	66.53	31	1983	80.32	13	1983	86.07	26
1984	70.30	*21	1984	85.71	1	1984	87.80	22
1985	76.33	2	1985	81.90	4	1986	91.37	6
1986	73.33	* 7	1986	81.55	8	1986	91.53	5

Range T:    12.37                                      11.84                                      11.70 deg.

NOTE:    \* = Numerical position tie.    Each has same total degrees.

**TABLE B-32. MONTHLY AVERAGE DAILY TEMPERATURE  
RANKED FROM WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

Avg			August			September		
July			92.45			86.86		
93.77								
<u>Year</u>	<u>Avg Temp</u>	<u>Rank</u>	<u>Year</u>	<u>Avg Temp</u>	<u>Rank</u>	<u>Year</u>	<u>Avg Temp</u>	<u>Rank</u>
1954	93.55	20	1954	90.77	29	1954	89.30	5
1955	90.19	33	1955	91.42	*25	1955	88.10	14
1956	92.68	26	1956	92.06	18	1956	92.37	1
1957	95.87	4	1957	91.74	21	1957	87.60	16
1958	93.87	16	1958	93.48	* 9	1958	88.53	*10
1959	96.23	* 2	1959	91.65	23	1959	85.23	25
1960	94.87	* 8	1960	93.26	11	1960	88.77	6
1961	92.97	24	1961	91.87	19	1961	83.97	29
1962	92.84	25	1962	94.90	3	1962	88.20	12
1963	94.10	15	1963	91.68	22	1963	89.47	4
1964	94.39	12	1964	91.48	24	1964	85.90	22
1965	93.26	22	1965	93.06	13	1965	82.43	31
1966	93.84	17	1966	93.65	8	1966	87.73	15
1967	94.87	* 8	1967	94.32	6	1967	85.10	*26
1968	92.00	29	1968	88.94	33	1968	86.47	19
1969	93.58	19	1969	96.74	1	1969	89.53	3
1970	95.19	7	1970	93.94	7	1970	85.93	21
1971	94.35	13	1971	91.42	*25	1971	86.50	18
1972	95.81	5	1972	90.45	30	1972	85.70	24
1973	93.10	23	1973	91.84	20	1973	85.10	*26
1974	92.10	*27	1974	92.39	16	1974	88.53	*10
1975	93.35	21	1975	93.48	* 9	1975	88.13	13
1976	92.10	*27	1976	91.16	28	1976	82.57	30
1977	94.61	*10	1977	92.26	17	1977	86.40	20
1978	96.42	1	1978	92.48	15	1978	85.80	23
1979	93.61	18	1979	89.32	32	1979	91.77	2
1980	96.23	* 2	1980	93.13	12	1980	87.17	17
1981	94.61	10	1981	94.94	2	1981	88.93	8
1982	91.90	30	1982	92.77	14	1982	84.83	28
1983	94.23	14	1983	89.71	31	1983	89.17	7
1984	90.35	32	1984	91.32	27	1984	89.20	6
1985	95.58	6	1985	94.68	4	1986	79.60	33
1986	91.87	31	1986	94.45	5	1986	82.30	32

Range T:      6.23                                      7.80                                      12.77 deg.

NOTE: \* - Numerical position tie. Each has same total degrees.

**TABLE B-33. MONTHLY AVERAGE DAILY TEMPERATURE  
RANKED FROM WARMEST TO COOLEST  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

Avg	October 75.39		November 62.79			December 55.08		
Year	Avg Temp	Rank	Year	Avg Temp	Rank	Year	Avg Temp	Rank
1954	77.97	8	1954	66.43	* 1	1954	55.55	13
1955	79.26	4	1955	62.50	20	1955	57.65	5
1956	74.52	20	1956	61.37	24	1956	55.58	12
1957	72.48	28	1957	59.70	30	1957	57.45	8
1958	79.55	2	1958	62.93	17	1958	58.81	3
1959	76.10	14	1959	65.13	6	1959	55.77	11
1960	75.42	16	1960	62.80	19	1960	53.87	23
1961	73.68	23	1961	60.10	29	1961	54.26	22
1962	75.71	15	1962	66.43	* 1	1962	58.03	4
1963	77.87	9	1963	63.40	14	1963	54.48	21
1964	79.97	1	1964	59.10	32	1964	54.95	18
1965	78.45	6	1965	64.90	7	1965	53.84	24
1966	74.71	19	1966	64.53	8	1966	56.03	10
1967	77.10	10	1967	66.03	3	1967	51.29	31
1968	75.03	18	1968	63.87	11	1968	50.35	33
1969	72.00	31	1969	63.67	13	1969	55.42	14
1970	72.19	30	1970	62.83	18	1970	53.19	26
1971	69.90	33	1971	60.30	28	1971	51.61	30
1972	71.42	32	1972	58.67	33	1972	52.58	28
1973	75.29	17	1973	61.33	25	1973	56.84	9
1974	76.19	13	1974	63.10	16	1974	52.29	29
1975	73.29	25	1975	62.40	21	1975	55.19	*15
1976	74.35	21	1976	64.00	10	1976	54.74	19
1977	78.61	5	1977	65.73	4	1977	58.90	2
1978	79.39	3	1978	61.50	22	1978	51.10	32
1979	78.13	7	1979	61.13	26	1979	57.48	* 6
1980	76.97	11	1980	64.07	9	1980	59.81	1
1981	72.65	*26	1981	65.20	5	1981	55.19	*15
1982	73.58	24	1982	61.10	27	1982	53.42	25
1983	76.87	12	1983	63.30	15	1983	57.48	* 6
1984	72.35	29	1984	61.47	23	1984	53.06	27
1985	74.10	22	1985	59.47	31	1986	54.91	20
1986	72.65	*26	1986	63.73	12	1986	55.00	17

Range T: 10.07

7.76

9.46 deg.

NOTE: \* - Numerical position tie. Each has same total degrees.



**TABLE B-34. MONTHLY SUMS OF DAILY AVERAGE TEMPERATURES  
COMPARED WITH THE PREVIOUS MONTH  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

NOTE: The month listed in col. 1 is always compared to the month in col. 2.  
+ means the month in col. 1 was warmer than the month in col. 2.  
- means the month in col. 1 was cooler than the month in col. 2.  
Figures shown are the total daily average temperature differences  
between the two months regardless of the number of days in each  
month. Comparison began with Feb 1954 to Jan 1954 and ended with Jan  
1987 to Dec 1986.

<u>Column</u>					<u>Range</u>		
<u>1</u>	<u>2</u>	<u>Avg</u>	<u>Deg</u>	<u>Year</u>	<u>Deg</u>	<u>Year</u>	
Feb	Jan	- 18	+ 253	1963	- 239	1956	
Mar	Feb	+ 309	+ 508	1966	+ 92	1954	
Apr	Mar	+ 144	+ 432	1962	- 109	1967	
May	Apr	+ 320	+ 548	1984	+ 56	1962	
Jun	May	+ 192	+ 424	1977	- 23	1984	
Jul	Jun	+ 261	+ 437	1965	+ 94	1974	
Aug	Jul	- 41	+ 98	1969	- 166	1972	
Sep	Aug	- 260	- 16	1979	- 547	1985	
Oct	Sep	- 269	- 41	1965	- 461	1956	
Nov	Oct	- 453	- 296	1981	- 706	1964	
Dec	Nov	- 176	- 10	1957	- 391	1967	
Jan	Dec	- 7	+ 235	1968	- 222	1962	

The following shows the range of the sum of the daily average temperatures  
for each month in successive years. The comparison is for 1954 - 1986.

<u>Month</u>	<u>Years</u>	<u>Deg</u>	<u>Years</u>	<u>Deg</u>
Jan	1979 - 1980	+ 265	1981 - 1982	- 200
Feb	1956 - 1957	+ 256	1954 - 1955	- 296
Mar	1977 - 1978	+ 228	1972 - 1973	- 411
Apr	1967 - 1968	+ 203	1962 - 1963	- 249
May	1957 - 1958	+ 331	1958 - 1959	- 259
Jun	1965 - 1966	+ 197	1981 - 1982	- 241
Jul	1984 - 1985	+ 162	1983 - 1984	- 120
Aug	1968 - 1969	+ 242	1967 - 1968	- 167
Sep	1965 - 1966	+ 159	1984 - 1985	- 288
Oct	1957 - 1958	+ 219	1955 - 1956	- 147
Nov	1961 - 1962	+ 190	1963 - 1964	- 129
Dec	1978 - 1979	+ 198	1977 - 1978	- 242

The average daily difference is derived by dividing the figures shown by the  
number of days in the month. Example: the average March day of 1973 was  
13.3 deg fahrenheit cooler than the average March day of 1972.

**APPENDIX C. TABLES OF OTHER WEATHER ELEMENTS  
US ARMY YUMA PROVING GROUND, AZ**

**TABLE C-1. MAXIMUM GUSTY WIND RECORDED FOR EACH MONTH  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month</u>	<u>Date</u>	<u>Year</u>	<u>Direction</u>	<u>Speed</u>	
				<u>Mi/h</u>	<u>*Kn</u>
Jan	27	1974	NNW	39	33.9
Feb	21	1975	NNW	52	45.2
Mar	26	1970	NNW	71	61.7
Apr #	2	1981	NW	42	36.5
Apr #	15	1976	SSW	42	36.5
May	4	1964	WSW	49	42.6
Jun	7	1964	W	53	46.1
Jul	28	1961	ENE	60	52.2
Aug	19	1973	ESE	62	53.9
Sep	5	1975	SW	47	40.9
Oct #	3	1966	S	37	32.2
Oct #	22	1978	ENE	37	32.2
Nov	21	1957	N	47	40.9
Dec	23	1982	W	45	39.1

NOTE: # - Two occurrences of the same maximum wind speed.

\* - Data were recorded in mi/h. Dividing by 1.15 converts to kn.

SPECIAL NOTE: In the annual summary for 1959 a thunderstorm was reported on August 7 between 1645 and 1700 local standard time with sustained winds exceeding 50 kn (57.5 mi/h) for 10 minutes with a peak gust of 80 kn (92.0 mi/h) at the RAWIN Station in the A&A area. The exact location of the A&A area of 1959 is not known. Data at the RAWIN site were recorded in kn. Knots are converted to mph by multiplying by 1.15.

**TABLE C-2. THUNDERSTORM OCCURRENCES BY MONTH AND YEAR**  
**(PERIOD OF RECORD: 1957 - 1977)**  
**US ARMY YUMA PROVING GROUND, AZ**

<u>Month</u> <u>Year</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
1957	0	0	0	1	0	0	0	6	0	2	0	0	9
1958	0	0	3	0	1	3	2	8	1	3	0	0	21
1959	0	0	0	0	1	0	2	8	3	0	0	2	16
1960	0	0	0	0	0	5	4	2	7	1	0	0	19
1961	0	0	0	0	0	0	2	13	5	0	0	0	20
1962	0	0	0	0	0	0	0	2	2	0	1	0	5
1963	0	0	0	0	0	1	0	3	1	3	0	0	8
1964	0	0	0	1	2	0	2	3	1	2	0	0	11
1965	0	1	0	1	0	0	3	1	0	0	0	0	6
1966	0	0	1	0	0	0	0	1	0	2	0	0	4
1967	0	0	0	0	0	0	4	10	2	0	1	0	17
1968	0	0	0	0	0	0	4	0	0	0	0	0	4
1969					None Reported								-
1970	0	0	0	0	0	0	2	0	0	0	0	0	2
1971	0	0	0	0	0	0	0	3	1	0	0	0	4
1972	0	0	0	0	0	0	2	0	0	0	0	0	2
1973	0	0	0	0	0	0	1	4	0	0	0	0	5
1974	0	0	0	0	0	0	1	1	4	2	0	0	8
1975	0	0	0	0	0	0	3	8	5	1	0	0	17
1976	0	1	0	0	1	0	0	0	9	3	1	0	15
1977	0	0	0	0	0	2	0	2	3	0	0	0	7
Total	0	2	4	3	5	11	32	75	44	19	3	2	200
Average	0	0	0	0	0	0	2	4	2	1	0	0	9

**TABLE C-3. SKY CONDITION: ANNUAL NUMBER OF DAYS**  
**(PERIOD OF RECORD: 1957 - 1977)**  
**US ARMY YUMA PROVING GROUND, AZ**

Condition:	Clear		Partly Cloudy		Cloudy		
Sky cover:	(0.0 - 0.3)		(0.4 - 0.7)		(0.8 - 1.0)		
<u>Year</u>	<u>Days</u>	<u>Pct</u>	<u>Days</u>	<u>Pct</u>	<u>Days</u>	<u>Pct</u>	<u>Total</u>
1957	#209	57.26	89	24.38	*67	18.36	365
1958	259	70.96	69	18.90	37	10.14	365
1959	238	65.21	80	21.92	47	12.88	365
1960	236	64.48	81	22.13	49	13.39	366
1961	243	66.58	68	18.63	54	14.79	365
1962	241	66.03	73	20.00	51	13.97	365
1963	233	63.84	88	24.11	44	12.05	365
1964	249	68.03	91	24.86	26	7.10	366
1965	235	64.38	65	26.03	35	9.59	365
1966	252	69.04	94	25.75	19	5.21	365
1967	230	63.01	100	27.40	35	9.59	365
1968	252	68.85	83	22.68	31	8.47	366
1969	242	66.30	88	24.11	35	9.59	365
1970	229	62.74	*108	29.59	28	7.67	365
1971	257	70.41	95	26.03	13	3.56	365
1972	243	66.39	97	26.50	26	7.10	366
1973	274	75.07	82	22.47	# 9	2.47	365
1974	262	71.78	88	24.11	15	4.11	365
1975	*284	77.81	# 67	18.36	14	3.84	365
1976	245	66.94	91	24.86	30	8.20	366
1977	239	65.48	85	23.29	41	11.23	365
TOTAL	5152	(67.17)	1812	(23.62)	706	(9.20)	7670
AVG	245	67.12	86	23.56	34	9.32	---

NOTE: \* - Maximum occurrence per category.  
# - Minimum occurrence per category.

The monthly average daily sky cover is shown in the Climate Calendar, Appendix H.

Due to changes in the hours of observations and reporting procedures these data terminate in 1977.

**TABLE C-4. DUST OCCURRENCES BY MONTH AND YEAR**  
**(PERIOD OF RECORD: 1957 - 1977)**  
**US ARMY YUMA PROVING GROUND, AZ**

The method of reporting dust data in the monthly summaries varied over this period. The only indication of intensity of such dust phenomena is the restriction of visibility to below 7 miles.

<u>Month</u> <u>Year</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
1957	U	U	U	U	U	U	U	U	U	U	U	U	7
1958					None	Reported							-
1959					None	Reported							-
1960	0	0	0	0	0	0	2	0	1	1	1	0	5
1961	0	0	0	0	0	0	0	0	0	0	1	0	(*)1
1962					None	Reported							-
1963	0	0	0	1	0	0	1	3	2	2	2	0	11
1964	0	1	0	0	0	1	0	1	0	1	0	1	5
1965	2	2	0	0	0	0	0	0	16	1	0	0	21
1966	0	0	1	0	1	1	0	0	0	0	0	0	3
1967	0	0	0	2	1	1	0	5	1	0	0	2	12
1968	0	0	0	0	0	0	2	1	0	0	2	0	5
1969					None	Reported							-
1970	0	0	0	0	0	0	1	0	0	0	0	0	1
1971					None	Reported							-
1972					None	Reported							-
1973	0	0	0	0	0	0	0	4	0	0	0	0	4
1974	2	1	2	1	1	1	0	0	1	0	0	0	9
1975	1	1	4	0	2	4	2	0	0	1	0	0	15
1976	0	2	1	0	0	0	0	0	1	0	1	0	5
1977	0	0	1	0	0	0	0	1	0	0	1	0	3
TOTAL	5	7	9	4	5	8	8	15	22	6	8	3	107

NOTE: Monthly totals do not sum to total totals due to 1957 data.  
 U - Total dust occurrences in annual summary. Monthly data unknown.  
 \* - Report stated dust storm was brief but severe.

**TABLE C-5. RELATIVE HUMIDITY IN PERCENT**  
**(PERIOD OF RECORD: 1954 - 1977)**  
**US ARMY YUMA PROVING GROUND, AZ**

<u>Month</u>	<u>#-Avg Max</u>	<u>#-Avg Min</u>	<u>*-Avg</u>	<u>Hi Avg / Year</u>	<u>Lo Avg / Year</u>
Jan	61	23	43	64-78	27-61,75
Feb	57	19	38	59-83	20-61,64
Mar	50	15	33	52-83	18-65
Apr	43	13	27	37-71	19-72,74
May	41	12	25	34-71	20-61,63
Jun	40	12	23	29-69,71,72	15-78
Jul	50	20	33	46-84	25-57
Aug	57	22	38	50-71	25-75
Sep	54	19	36	50-76	26-68,73
Oct	53	18	34	54-72	21-65
Nov	54	20	37	51-78	23-75
Dec	60	24	43	74-84	25-58

**ANNUAL AVERAGES**

<b>Annual</b>	<b>Avg Max</b>	<b>Avg Min</b>	<b>Avg</b>	<b>Hi Avg/Yr</b>	<b>Lo Avg/Yr</b>
	52	18	34	41 - 78	29 - 75

NOTE: # - These data were extracted from monthly summary reports. The method changed in 1978 to reporting only monthly average relative humidity.  
 \* - These data are the monthly average relative humidity values from 1954 through 1986.

**TABLE C-6. SOIL TEMPERATURE IN DEGREES FAHRENHEIT  
(PERIOD OF RECORD: 1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

Soil temperatures are made by using copper constantin thermocouples buried one-inch deep in the soil. The data is recorded on a strip chart Honeywell Recorder Class 15.

<u>Month</u>	<u>Max</u>	<u>Min</u>	<u>High</u>	<u>Date / Year</u>	<u>Low</u>	<u>Date / Year</u>
Jan	81	41	107	19-71	#18	6-71
Feb	90	45	120	26-86	22	?-56(A)
Mar	102	51	131	17-74	26	3-71
Apr	116	57	147	13-62	38	3-77
May	128	64	152	25-74	46	1-67
Jun	137	73	158	15-61,27-74	55	15-62
Jul	141	83	*160(B)	12-61, 9-75	*63	4-61
Aug	138	82	157	2-61	60	16-57
Sep	129	75	150	9-74	55	23-60
Oct(X)	113	62	139	1-80	33	30-71
Nov(X)	94	49	119	11-73	30	17-58,29-76
Dec	80	42	#100(C)	6-68,7-70,17-73	25	12-72, 8-78
Annual Avg	112	60				

NOTE: (A) - 22 was reported in '56, but the date is not available. 23 was reported on 28 Feb '62.  
 (B) - 160.2 reported in '61. '75 data were not available to nearest tenth.  
 (C) - 100 degrees reported on 20 Dec '79. Data reported were questionable and were not used in determining the average max in '79. The minimum and average data were missing on that date.  
 X - 32 years of data. In 1982 11 days of data were missing in October and 6 days of data were missing in November.  
 \* - Highest temperature in that column.  
 # - Lowest temperature in that column.



**TABLE C-7. STATION PRESSURE IN MILLIBARS  
(PERIOD OF RECORD: 1957 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month</u>	<u>Avg Max</u>	<u>Avg Min</u>	<u>Average</u>	<u>Highest</u>	<u>Day/Yr</u>	<u>Lowest</u>	<u>Day/Yr</u>
Jan	1009.1	1004.1	1006.3	1024.1	1,79	988.0	19,59
Feb	1007.4	1002.2	1004.6	1020.9	8,74	*988.4	20,85
Mar	1004.8	999.9	1002.0	1021.0	2,71	*981.0	3,83
Apr	1002.7	998.1	1000.1	1013.1	23,68	985.0	25,85
May	999.9	995.6	997.7	1012.4	2,70	986.3	30,83
Jun	998.2	993.9	996.0	*1005.2	4,71	985.4	25,59
Jul	999.4	994.9	997.2	1007.0	19,74	988.0	1,74
Aug	999.5	995.1	997.2	1006.4	19,73	987.2	23,72
Sep	999.5	995.2	997.0	1008.0	29,70	983.7	16,65
Oct	1002.8	998.6	1000.4	1015.4	31,81	986.3	29,59
Nov	1006.5	1002.0	1004.1	1023.8	18,69	986.2	30,82
Dec	1008.7	1003.8	1005.9	*1024.9	9,78	984.8	13,84
Annual Avg	1003.2	998.6	1000.7				

NOTE: \* - Highest pressure in that column  
# - Lowest pressure in that column

**APPENDIX D. DEGREE DAYS TABLES  
US ARMY YUMA PROVING GROUND, AZ**

**TABLE D-1. DEGREE DAYS. HEATING, BASE 65 DEGREES FAHRENHEIT  
33-YEAR AVERAGE (1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month Date</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>
1	0	92	406	715	862
2	0	99	419	723	865
3	0	106	432	731	869
4	0	114	445	739	873
5	0	122	458	746	877
6	0	130	470	753	880
7	0	139	481	760	883
8	0	149	492	767	885
9	0	158	502	773	886
10	0	167	514	779	888
11	0	177	525	785	890
12	0	188	536	790	892
13	1	199	546	796	894
14	3	210	555	801	896
15	6	221	564	806	898
16	10	231	572	811	899
17	14	241	580	816	900
18	19	251	588	821	901
19	24	261	597	825	902
20	29	271	606	830	---
21	34	281	616	835	
22	40	292	627	840	
23	45	302	636	844	
24	49	312	645	849	
25	53	322	655	852	
26	58	333	664	855	
27	64	345	672	858	
28	71	357	681	860	
29	78	369	690	(+2)	
30	85	381	699		
31	---	394	707		

NOTE: \* - Leap year. March data are for non-leap years. For leap years add +2 to the sums shown for all dates after Feb 28. Hence Feb 29 = 862 and Mar 1 = 864 etc.

NOTE: Each date's average temperature was determined by summing the average temperatures and dividing by the number of years of available data. Heating degree days are determined by the number of degrees that the date's average temperature falls below the stated base, in this case 65 deg F. Degree days are cumulative over an entire season, or any desired time period.

**TABLE D-2. DEGREE DAYS. COOLING, BASE 65 DEGREES FAHRENHEIT  
33-YEAR AVERAGE (1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month</u> <u>Date</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>
1	0	22	119	669	1379	2274	3121	3766	4075
2	0	23	130	688	1406	2303	3147	3782	4077
3	0	25	241	708	1434	2332	3173	3798	4080
4	0	28	251	728	1462	2361	3198	3813	4083
5	0	33	260	748	1490	2390	3223	3828	4086
6	0	38	269	768	1518	2419	3248	3843	4089
7	0	43	279	788	1546	2448	3273	3858	4091
8	0	48	290	808	1575	2477	3299	3872	4092
9	0	54	302	828	1604	2506	3325	3885	4093
10	0	61	315	847	1634	2535	3350	3898	4094
11	0	67	327	867	1664	2563	3374	3910	----
12	0	73	340	888	1694	2591	3398	3922	
13	0	80	354	910	1723	2619	3421	3934	
14	0	87	369	933	1752	2646	3443	3946	
15	0	95	383	956	1781	2672	3465	3957	
16	0	103	398	980	1810	2698	3486	3967	
17	0	110	414	1004	1838	2723	3507	3977	
18	0	116	431	1029	1867	2749	3527	3986	
19	0	121	448	1055	1896	2775	3546	3995	
20	0	127	464	1081	1925	2801	3564	4004	
21	1	133	480	1107	1953	2828	3583	4012	
22	2	140	496	1133	1971	2855	3602	4020	
23	3	148	512	1160	2000	2881	3620	4028	
24	4	156	528	1187	2089	2907	3639	4035	
25	6	164	544	1214	2068	2934	3658	4042	
26	8	172	561	1241	2097	2961	3677	4049	
27	10	180	578	1269	2126	2988	3695	4055	
28	12	189	596	1297	2156	3015	3713	4061	
29	14	198	614	1324	2185	3043	3731	4066	
30	17	208	633	1351	2214	3070	3749	4069	
31	20	---	651	----	2244	3096	----	4072	

NOTE: Each date's average temperature was determined by summing the average temperatures and dividing by the number of years of available data. Cooling degree days are determined by the number of degrees that the date's average temperature is above the stated base, in this case 65 deg F. Degree days are cumulative over an entire season, or any desired time period.

**TABLE D-3. DEGREE DAYS. COOLING, BASE 70 DEGREES FAHRENHEIT  
33-YEAR AVERAGE (1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month</u> <u>Date</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>
1	0	56	351	911	1651	2343	2838
2	0	62	365	933	1675	2364	2840
3	0	68	380	956	1699	2385	2860
4	0	73	395	979	1723	2405	2870
5	0	77	410	1001	1747	2425	2880
6	0	81	425	1025	1771	2445	2890
7	0	86	440	1048	1795	2465	2900
8	0	92	455	1072	1819	2486	2909
9	1	99	470	1096	1843	2507	2917
10	3	107	484	1121	1867	2527	2925
11	4	114	499	1146	1890	2549	2932
12	5	122	515	1171	1913	2565	2939
13	7	131	532	1195	1936	2583	2946
14	9	141	550	1219	1958	2600	2953
15	12	150	568	1243	1979	2617	2959
16	15	160	587	1267	2000	2633	2964
17	16	171	606	1290	2020	2649	2969
18	18	183	626	1314	2041	2664	2973
19	18	195	647	1338	2062	2678	2977
20	19	206	668	1362	2083	2691	2981
21	20	217	689	1385	2105	2705	2984
22	22	228	710	1408	2127	2719	2987
23	25	239	732	1432	2148	2732	2990
24	28	250	754	1456	2169	2746	2992
25	31	261	776	1480	2191	2760	2994
26	34	273	798	1504	2213	2774	2996
27	37	285	821	1528	2235	2787	2997
28	41	298	844	1553	2257	2800	2998
29	45	311	866	1577	2280	2813	----
30	50	325	888	1601	2302	2826	
31	--	338	---	1626	2323	----	

NOTE: Each date's average temperature was determined by summing the average temperatures and dividing by the number of years of available data. Cooling degree days are determined by the number of degrees that the date's average temperature is above the stated base, in this case 70 deg F. Degree days are cumulative over an entire season, or any desired time period.

**TABLE D-4. DEGREE DAYS. COOLING, BASE 75 DEGREES FAHRENHEIT  
33-YEAR AVERAGE (1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month</u> <u>Date</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>
1	1	143	553	1138	1675	2020
2	2	152	570	1157	1691	2026
3	3	162	588	1176	1707	2032
4	3	172	606	1195	1722	2037
5	3	182	624	1214	1747	2042
6	3	192	642	1233	1752	2047
7	3	202	660	1252	1767	2052
8	4	212	679	1271	1783	2056
9	6	222	698	1290	1799	2059
10	9	231	718	1309	1814	2062
11	18	211	738	1327	1828	2064
12	10	252	758	1345	1842	2066
13	13	264	777	1363	1855	2068
14	26	277	796	1380	1867	2070
15	29	290	815	1396	1879	2071
16	34	304	834	1412	1890	----
17	30	318	852	1427	1901	
18	47	333	871	1443	1911	
19	53	349	890	1459	1920	
20	59	365	909	1475	1928	
21	63	381	927	1492	1937	
22	77	397	945	1509	1946	
23	71	414	964	1525	1954	
24	86	431	983	1541	1963	
25	81	448	1002	1558	1972	
26	95	465	1021	1575	1981	
27	102	483	1040	1592	1989	
28	110	501	1060	1609	1997	
29	118	518	1089	1627	2005	
30	127	535	1098	1644	2013	
31	135	---	1118	1660	----	

NOTE: Each date's average temperature was determined by summing the average temperatures and dividing by the number of years of available data. Cooling degree days are determined by the number of degrees that the date's average temperature is above the stated base, in this case 75 deg F. Degree days are cumulative over an entire season, or any desired time period.

**TABLE D-5. DEGREE DAYS. COOLING, BASE 80 DEGREES FAHRENHEIT  
33-YEAR AVERAGE (1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month Date</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>
1	0	31	291	721	1103	1299
2	0	35	303	735	1114	1300
3	0	40	316	749	1125	1301
4	0	45	329	763	1135	----
5	0	50	332	777	1145	
6	0	55	355	791	1155	
7	0	60	368	805	1165	
8	0	65	382	819	1176	
9	0	70	396	833	1187	
10	0	74	411	847	1197	
11	0	79	426	860	1206	
12	0	85	441	873	1215	
13	0	91	455	886	1223	
14	0	100	469	898	1230	
15	0	108	483	909	1237	
16	0	117	497	920	1243	
17	1	126	510	930	1249	
18	3	136	524	941	1254	
19	5	147	538	952	1258	
20	6	158	552	963	1261	
21	7	169	565	975	1265	
22	8	180	578	987	1269	
23	9	192	592	998	1272	
24	10	204	606	1009	1276	
25	11	216	620	1021	1280	
26	13	220	634	1033	1284	
27	15	241	648	1045	1287	
28	18	252	663	1057	1290	
29	21	263	677	1070	1293	
30	25	274	691	1082	1296	
31	28	---	706	1093	----	

NOTE: Each date's average temperature was determined by summing the average temperatures and dividing by the number of years of available data. Cooling degree days are determined by the number of degrees that the date's average temperature is above the stated base, in this case 80 deg F. Degree days are cumulative over an entire season, or any desired time period.

**TABLE D-6. DEGREE DAYS. COOLING, BASE 85 DEGREES FAHRENHEIT  
33-YEAR AVERAGE (1954 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

<u>Month Date</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>
1	0	112	387	613
2	0	119	396	619
3	0	127	405	625
4	0	135	414	630
5	0	143	423	635
6	0	151	432	640
7	0	159	441	645
8	0	168	450	651
9	0	177	459	657
10	0	187	468	662
11	0	197	476	666
12	1	207	484	670
13	3	216	492	673
14	6	225	499	675
15	9	234	505	677
16	13	243	511	678
17	17	251	516	678
18	22	260	522	---
19	28	269	528	
20	34	278	534	
21	40	286	541	
22	46	294	548	
23	53	303	554	
24	60	312	560	
25	67	321	567	
26	74	330	573	
27	82	339	580	
28	90	349	587	
29	97	358	595	
30	104	367	602	
31	--	377	608	

NOTE: Each date's average temperature was determined by summing the average temperatures and dividing by the number of years of available data. Cooling degree days are determined by the number of degrees that the date's average temperature is above the stated base, in this case 85 deg F. Degree days are cumulative over an entire season, or any desired time period.



APPENDIX E. SOLAR RADIATION TABLES  
US ARMY YUMA PROVING GROUND, AZ

An Eppley 15 junction pyrheliometer was used to measure solar radiation until the mid 1970's at which time the present Eppley Position Pyrenometer Model PSP went on line. The Eppley instruments are of the thermoelectric type. Radiation is allowed to fall on two concentric silver rings, the outer coated with magnesium oxide and the inner covered with lamp black. A system of thermocouples called a thermopyle is used to measure the temperature difference between the rings. Attachments are provided so that measurements of direct and diffuse solar radiation may be obtained. Only vertical radiation data is contained in this report. The data were split into two 11-yr groupings then consolidated for benefit of users who may wish to compare results. It should be noted that variances in the other elements occur when grouped in 11-yr units also. For example: temperatures were cooler from 1965-1975 than 1954 - 1964, and then warmer than either group during the 1976 - 1986 period.

**TABLE E-1. SOLAR RADIATION. VERTICAL EPPLEY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

January												
	Years 1965-1975				Years 1976-1986				Years 1965-1986			
Day	gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>		gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>		gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	263	26	971	97	259	26	955	95	261	26	963	96
2	276	27	1019	101	257	26	948	94	267	26	983	98
3	292	29	1075	107	249	25	918	91	270	27	997	99
4	289	29	1063	105	275	27	1014	101	282	28	1038	103
5	261	26	963	95	247	25	912	90	254	25	937	93
6	264	26	975	96	252	25	930	92	258	26	952	94
7	251	25	924	91	250	25	922	91	250	25	923	91
8	243	24	894	88	289	28	1064	105	266	26	979	97
9	255	25	941	93	217	21	801	79	236	23	871	86
10	278	27	1024	101	252	25	928	91	265	26	976	96
11	267	26	984	97	257	25	949	93	262	26	966	95
12	265	26	978	96	273	27	1005	99	269	26	992	97
13	283	28	1044	102	284	28	1046	103	284	28	1045	102
14	282	28	1041	102	227	22	836	82	255	25	938	92
15	267	26	985	96	287	28	1058	103	277	27	1022	100
16	259	25	954	93	262	25	964	94	260	25	959	93
17	280	27	1034	101	288	28	1060	103	284	28	1046	102
18	284	27	1045	101	280	27	1031	100	282	27	1038	101
19	313	30	1154	112	259	25	956	93	286	28	1055	102
20	284	27	1048	101	312	30	1149	111	297	29	1096	106
21	292	28	1077	104	250	24	921	89	271	26	999	96
22	299	29	1104	106	282	27	1041	100	291	28	1072	103
23	316	30	1166	112	297	28	1093	105	306	29	1129	108
24	298	29	1098	105	309	30	1139	109	303	29	1118	107
25	305	29	1124	108	298	29	1098	105	302	29	1111	106
26	311	30	1147	109	313	30	1155	110	312	30	1151	110
27	310	29	1141	109	306	29	1126	107	308	29	1134	108
28	321	31	1184	112	305	29	1122	107	313	30	1153	110
29	342	32	1260	119	290	27	1068	101	317	30	1169	111
30	322	30	1187	112	259	24	955	90	294	28	1083	102
31	334	31	1230	116	315	30	1162	110	325	31	1196	113

**TABLE E-2. SOLAR RADIATION. VERTICAL EPPELY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

Day	Years 1965-1975				February Years 1976-1986				Years 1965-1986			
	<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	337	32	1244	117	339	32	1250	118	338	32	1247	117
2	362	34	1333	125	297	28	1095	103	331	31	1220	114
3	345	32	1271	119	297	28	1096	103	321	30	1184	111
4	336	31	1237	115	298	28	1098	102	317	30	1168	109
5	337	31	1243	116	316	29	1165	109	327	30	1204	112
6	316	29	1166	108	277	26	1020	95	297	28	1093	101
7	341	32	1258	117	349	32	1286	119	345	32	1272	118
8	356	33	1312	121	277	26	1022	94	317	29	1167	108
9	323	30	1189	110	332	31	1224	113	327	30	1206	111
10	311	29	1147	105	360	33	1326	122	335	31	1236	114
11	358	33	1320	121	356	33	1310	120	357	33	1315	120
12	368	34	1358	124	383	35	1410	129	375	34	1384	126
13	347	32	1279	117	310	28	1144	104	331	30	1218	111
14	375	34	1382	126	356	32	1311	119	366	33	1348	123
15	375	34	1382	125	360	33	1327	120	368	33	1356	123
16	382	35	1408	127	378	34	1393	126	380	34	1401	127
17	383	35	1410	127	415	37	1531	138	399	36	1470	133
18	417	38	1537	138	385	35	1421	128	401	36	1476	133
19	423	38	1559	140	362	32	1334	120	392	35	1446	130
20	379	34	1397	125	421	38	1550	139	399	36	1470	133
21	381	34	1406	126	402	36	1480	132	391	35	1441	129
22	386	34	1422	127	418	37	1540	137	400	36	1475	131
23	418	37	1542	137	435	39	1604	142	427	38	1573	139
24	422	37	1557	138	364	32	1341	118	393	35	1449	128
25	422	37	1555	137	445	39	1642	145	434	38	1598	141
26	416	37	1532	135	427	38	1574	138	422	37	1553	137
27	432	38	1592	140	411	36	1516	133	422	37	1554	136
28	435	38	1604	140	399	35	1472	129	417	37	1538	131
29	453	39	1668	145	434	38	1601	140	442	39	1628	141

**TABLE E-3. SOLAR RADIATION. VERTICAL EPPLLEY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

March

Day	Years 1965-1975				Years 1976-1986				Years 1965-1986			
	<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	391	34	1439	125	335	29	1235	108	363	32	1337	117
2	419	36	1543	134	383	33	1411	123	401	35	1477	128
3	470	41	1731	150	440	38	1620	140	455	39	1675	145
4	456	39	1681	145	447	39	1647	142	451	39	1663	144
5	411	35	1515	131	430	37	1584	137	420	36	1550	134
6	455	39	1677	144	453	39	1670	143	454	39	1673	144
7	449	38	1654	142	445	38	1639	140	447	38	1647	141
8	410	35	1511	129	422	36	1556	133	416	36	1533	131
9	430	37	1583	135	468	40	1726	147	449	38	1654	141
10	388	33	1429	121	397	34	1464	124	393	33	1447	123
11	484	41	1785	151	418	35	1540	130	449	38	1657	140
12	494	42	1821	154	445	38	1641	138	472	40	1740	147
13	448	38	1651	139	462	39	1701	143	455	38	1676	141
14	475	40	1752	147	505	42	1862	156	490	41	1807	152
15	496	42	1829	153	501	42	1847	155	499	42	1838	154
16	517	43	1904	159	490	41	1806	151	504	42	1857	155
17	507	42	1868	155	470	39	1731	144	489	41	1803	150
18	506	42	1865	155	451	37	1663	138	480	40	1769	147
19	497	41	1831	152	470	39	1732	143	483	40	1782	147
20	500	41	1842	152	478	39	1760	145	489	40	1801	149
21	545	45	2009	165	495	41	1824	150	520	43	1916	158
22	500	41	1841	151	526	43	1939	159	513	42	1890	155
23	521	43	1919	157	535	44	1973	161	528	43	1946	159
24	525	43	1935	158	517	42	1905	155	521	43	1919	157
25	532	43	1961	160	518	42	1910	156	525	43	1935	158
26	519	42	1911	155	492	40	1813	147	506	41	1865	151
27	515	42	1900	154	516	42	1902	154	516	42	1901	154
28	544	44	2005	162	509	41	1875	151	526	43	1940	157
29	548	44	2018	162	551	44	2031	163	549	44	2025	163
30	582	47	2145	172	552	44	2034	163	567	45	2090	168
31	522	42	1925	154	526	42	1938	155	524	42	1932	155

**TABLE E-4. SOLAR RADIATION: VERTICAL EPPELY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

April

Day	Years 1965-1975				Years 1976-1986				Years 1965-1986			
	<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	534	43	1969	157	520	42	1918	153	527	42	1943	155
2	582	46	2144	171	536	43	1974	157	559	44	2059	164
3	526	42	1939	154	580	46	2138	170	553	44	2039	162
4	550	44	2027	160	585	46	2157	171	567	45	2089	165
5	588	46	2167	171	573	45	2110	167	580	46	2139	169
6	567	45	2089	164	523	41	1927	152	545	43	2008	158
7	595	47	2194	172	575	45	2118	167	585	46	2156	169
8	576	45	2124	166	592	46	2183	171	584	46	2154	169
9	535	42	1970	154	582	45	2145	168	558	44	2058	161
10	566	44	2084	162	577	45	2127	166	571	45	2106	164
11	578	45	2131	166	562	44	2070	161	570	44	2100	163
12	584	45	2154	167	594	46	2190	170	589	46	2170	168
13	617	48	2272	176	584	45	2153	166	601	46	2215	171
14	586	45	2161	167	601	46	2216	171	594	46	2189	169
15	623	48	2298	177	596	46	2195	169	610	47	2246	173
16	616	47	2272	174	602	46	2220	170	609	47	2246	172
17	617	47	2273	174	591	45	2177	167	605	46	2230	171
18	638	49	2350	180	619	47	2280	174	629	48	2317	177
19	637	49	2348	179	624	48	2298	175	631	48	2324	177
20	639	49	2355	179	601	46	2214	168	621	47	2288	174
21	644	49	2373	180	640	49	2358	179	642	49	2365	180
22	655	50	2415	183	627	47	2309	175	641	49	2362	179
23	661	50	2436	184	621	47	2289	173	641	48	2363	179
24	629	47	2319	175	634	48	2335	176	631	48	2327	176
25	668	50	2461	185	627	47	2310	174	647	49	2386	179
26	672	50	2477	186	618	46	2276	171	645	48	2377	178
27	655	49	2415	181	599	45	2208	165	629	47	2316	174
28	674	50	2484	186	585	44	2157	161	630	47	2321	173
29	657	49	2422	180	610	45	2249	168	635	47	2339	174
30	673	50	2481	184	601	45	2214	165	637	47	2348	175

**TABLE E-5. SOLAR RADIATION. VERTICAL EPPLEY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

May												
	Years 1965-1975				Years 1976-1986				Years 1965-1986			
Day	gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>		gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>		gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	687	51	2532	188	570	42	2101	156	629	47	2316	172
2	682	51	2515	186	644	48	2375	176	663	49	2445	181
3	665	49	2450	181	666	49	2453	181	665	49	2451	181
4	632	47	2330	172	661	49	2437	180	647	48	2384	176
5	655	48	2413	178	634	47	2337	172	644	47	2375	175
6	641	47	2361	174	665	49	2452	180	653	48	2407	177
7	653	48	2405	176	615	45	2266	166	634	46	2335	171
8	674	49	2485	182	673	49	2479	182	673	49	2482	182
9	676	49	2491	182	649	47	2393	175	663	48	2442	178
10	690	50	2543	186	675	49	2486	181	682	50	2514	184
11	691	50	2547	186	692	50	2549	186	691	50	2548	186
12	683	50	2516	183	666	48	2453	178	674	49	2485	181
13	677	49	2494	181	684	50	2522	183	680	49	2508	182
14	702	51	2587	187	675	49	2487	180	688	50	2537	184
15	688	50	2537	184	650	47	2394	173	669	48	2466	178
16	684	49	2522	182	675	49	2488	180	680	49	2506	181
17	693	50	2553	184	687	50	2531	182	690	50	2542	183
18	707	51	2604	188	677	49	2497	180	692	50	2550	184
19	701	50	2583	186	662	48	2438	175	681	49	2510	180
20	695	50	2560	184	685	49	2526	181	690	50	2544	183
21	716	51	2637	189	686	49	2528	181	701	50	2583	185
22	698	50	2574	184	700	50	2578	184	699	50	2576	184
23	668	48	2464	176	642	46	2368	169	655	47	2416	173
24	699	50	2577	184	676	48	2490	178	688	49	2535	181
25	702	50	2588	184	631	45	2327	166	667	48	2457	175
26	711	51	2621	187	649	46	2393	170	680	48	2507	178
27	689	49	2540	181	679	48	2501	178	684	49	2520	179
28	656	47	2416	172	683	48	2517	179	670	48	2469	175
29	700	50	2580	183	690	49	2544	180	695	49	2562	181
30	707	50	2606	185	670	47	2469	175	689	49	2537	180
31	713	50	2628	186	698	49	2572	182	706	50	2600	184

**TABLE E-6. SOLAR RADIATION. VERTICAL EPFLEY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

June

Day	Years 1965-1975				Years 1976-1986				Years 1965-1986			
	<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	719	51	2651	188	703	50	2590	183	711	50	2621	185
2	702	50	2589	183	703	50	2592	183	703	50	2590	183
3	701	49	2585	182	698	49	2574	182	700	49	2579	182
4	712	50	2625	185	691	49	2548	180	702	49	2586	182
5	698	49	2571	181	673	47	2479	174	686	48	2527	178
6	687	48	2530	178	689	48	2541	179	688	48	2535	178
7	712	50	2623	184	702	49	2587	182	707	50	2605	183
8	678	48	2499	176	693	49	2554	179	686	48	2526	178
9	702	49	2588	182	699	49	2577	181	701	49	2583	181
10	716	50	2637	185	711	50	2619	184	713	50	2629	184
11	703	49	2591	182	715	50	2634	185	709	50	2612	183
12	678	48	2499	175	726	51	2675	187	701	49	2583	181
13	725	51	2671	187	725	51	2673	187	725	51	2672	187
14	727	51	2680	188	720	50	2652	186	724	51	2667	187
15	697	49	2568	180	730	51	2690	188	713	50	2627	184
16	719	50	2651	186	726	51	2676	187	722	51	2663	186
17	705	49	2599	182	716	50	2639	185	711	50	2619	183
18	723	51	2665	186	721	50	2657	186	722	50	2661	186
19	668	47	2460	172	727	51	2678	187	697	49	2569	180
20	727	51	2680	187	723	51	2666	186	725	51	2673	187
21	717	50	2643	185	693	48	2555	179	705	49	2599	182
22	721	50	2656	186	696	49	2566	179	708	50	2611	183
23	722	50	2661	186	713	50	2628	184	718	50	2645	185
24	705	49	2599	182	686	48	2530	177	696	49	2564	179
25	687	48	2531	177	670	47	2470	173	678	47	2500	175
26	712	50	2623	183	703	49	2592	181	707	49	2607	182
27	709	50	2613	183	692	48	2551	178	701	49	2582	181
28	715	50	2635	185	657	46	2421	170	686	48	2528	177
29	701	49	2582	181	591	41	2179	153	648	45	2390	167
30	699	49	2578	181	663	46	2443	171	681	48	2511	176

**TABLE E-7. SOLAR RADIATION. VERTICAL EPPLEY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

July

Day	Years 1965-1975				Years 1976-1986				Years 1965-1986			
	<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	703	49	2589	181	703	49	2591	182	703	49	2590	182
2	693	49	2555	179	697	49	2569	180	695	49	2562	180
3	683	48	2518	177	702	49	2587	182	693	49	2552	179
4	677	48	2494	175	699	49	2578	181	688	48	2536	178
5	582	41	2144	151	704	49	2593	182	640	45	2358	166
6	624	44	2298	162	636	45	2342	165	630	44	2320	163
7	592	42	2181	153	648	46	2388	168	620	44	2284	161
8	654	46	2411	170	639	45	2355	166	647	46	2383	168
9	658	46	2426	171	675	48	2489	176	667	47	2458	173
10	680	48	2505	177	686	48	2528	178	683	48	2517	178
11	647	46	2384	168	624	44	2299	163	635	45	2342	165
12	658	47	2425	171	686	48	2528	179	672	47	2476	175
13	635	45	2339	166	665	47	2452	174	649	46	2393	169
14	588	42	2168	154	591	42	2177	154	590	42	2173	154
15	633	45	2331	165	626	44	2308	164	629	45	2319	164
16	622	44	2292	163	633	45	2333	166	627	45	2312	164
17	591	42	2177	155	602	43	2217	158	596	42	2196	156
18	632	45	2329	166	605	43	2229	159	618	44	2279	162
19	635	45	2339	167	640	46	2360	168	637	45	2349	167
20	609	43	2244	160	635	45	2339	167	621	44	2287	163
21	618	44	2277	163	619	44	2283	163	619	44	2280	163
22	589	42	2172	155	562	40	2071	148	576	41	2124	152
23	623	45	2298	165	620	45	2285	164	622	45	2292	165
24	640	46	2360	170	615	44	2265	163	628	45	2313	166
25	657	47	2420	174	639	46	2354	169	648	47	2387	172
26	607	44	2239	161	608	44	2239	161	608	44	2239	161
27	589	43	2170	157	641	46	2361	170	615	44	2266	164
28	596	43	2198	159	629	46	2320	168	613	44	2259	163
29	550	40	2025	147	609	44	2244	163	579	42	2135	155
30	580	42	2137	155	651	47	2401	174	616	45	2269	165
31	581	42	2142	156	612	44	2257	164	597	43	2199	160



**TABLE E-8. SOLAR RADIATION. VERTICAL EPPLEY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

August												
	Years 1965-1975				Years 1976-1986				Years 1965-1986			
Day	gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>		gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>		gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	582	42	2145	156	636	46	2344	171	610	44	2249	164
2	621	45	2288	167	608	44	2241	164	614	45	2264	165
3	575	42	2118	155	646	47	2379	174	610	45	2248	164
4	578	42	2129	156	646	47	2381	174	612	45	2255	165
5	625	46	2304	169	630	46	2321	170	627	46	2312	170
6	573	42	2112	155	603	44	2222	163	588	43	2167	159
7	621	46	2289	169	619	46	2281	168	620	46	2285	168
8	618	46	2277	168	599	44	2207	163	608	45	2242	165
9	565	42	2081	154	586	43	2158	160	575	42	2118	157
10	608	45	2242	166	593	44	2185	162	601	44	2214	164
11	589	44	2170	161	556	41	2050	152	573	43	2110	157
12	615	46	2267	169	545	40	2007	149	582	43	2143	159
13	625	47	2304	172	624	47	2300	171	625	47	2303	172
14	602	45	2218	166	619	46	2283	171	610	46	2247	168
15	622	47	2293	172	569	43	2097	157	596	45	2195	164
16	607	46	2238	168	543	41	2002	150	575	43	2120	159
17	602	45	2219	167	515	39	1898	143	561	42	2066	155
18	585	44	2154	162	574	43	2116	159	579	44	2135	161
19	609	46	2244	169	593	45	2184	165	601	45	2214	167
20	582	44	2144	162	567	43	2088	158	574	43	2115	160
21	591	45	2177	165	581	44	2140	162	586	44	2159	164
22	615	47	2268	172	587	45	2164	164	601	46	2216	168
23	585	45	2158	164	546	42	2011	153	566	43	2084	159
24	585	45	2157	165	525	40	1935	148	555	42	2046	156
25	594	45	2188	167	557	43	2053	157	575	44	2121	162
26	549	42	2022	155	605	46	2229	171	577	44	2126	163
27	572	44	2107	162	589	45	2170	167	580	45	2139	164
28	593	46	2184	168	585	45	2155	166	589	45	2169	167
29	590	46	2176	168	580	45	2139	165	585	45	2157	167
30	572	44	2109	163	563	44	2076	161	567	44	2090	162
31	578	45	2130	165	583	45	2150	167	581	45	2140	166

**TABLE E-9. SOLAR RADIATION. VERTICAL EPPLEY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

**September**

Day	Years 1965-1975				Years 1976-1986				Years 1965-1986			
	<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	543	42	2001	156	569	44	2096	163	556	43	2049	159
2	508	40	1873	146	560	44	2065	161	534	42	1969	154
3	536	42	1977	155	563	44	2076	162	550	43	2027	159
4	539	42	1985	156	489	38	1803	141	514	40	1894	149
5	561	44	2066	162	561	44	2068	163	561	44	2067	163
6	535	42	1970	155	509	40	1875	148	522	41	1923	152
7	548	43	2019	160	515	41	1898	150	531	42	1959	155
8	557	44	2052	163	541	43	1994	158	549	43	2023	160
9	553	44	2040	162	498	40	1836	146	526	42	1938	154
10	564	45	2078	166	538	43	1984	158	552	44	2036	162
11	552	44	2035	163	559	45	2059	164	555	44	2046	163
12	531	42	1958	157	549	44	2023	162	540	43	1989	159
13	524	42	1933	155	535	43	1972	158	530	43	1952	157
14	518	42	1911	154	533	43	1965	158	526	42	1938	156
15	541	44	1994	161	535	43	1972	159	538	43	1983	160
16	541	44	1993	161	490	40	1806	146	515	42	1899	154
17	536	44	1976	160	519	42	1912	155	527	43	1944	158
18	492	40	1813	147	509	41	1877	153	501	41	1845	150
19	511	42	1882	154	519	42	1912	156	515	42	1897	155
20	536	44	1974	162	492	40	1812	148	514	42	1893	155
21	532	44	1962	161	511	42	1883	154	522	43	1922	158
22	531	44	1957	161	445	37	1639	135	488	40	1798	148
23	538	44	1982	163	447	37	1648	136	488	40	1798	148
24	522	43	1923	159	479	40	1766	146	500	41	1844	152
25	522	43	1922	160	471	39	1737	144	497	41	1830	152
26	515	43	1899	158	463	38	1705	142	489	41	1802	150
27	479	40	1766	147	465	39	1714	143	472	39	1740	145
28	492	41	1815	152	483	40	1781	149	488	41	1798	150
29	434	36	1598	134	471	40	1737	146	452	38	1667	140
30	479	40	1764	149	441	37	1627	137	460	39	1696	143

**TABLE E-10. SOLAR RADIATION. VERTICAL EPPLEY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

October												
Years 1965-1975					Years 1976-1986				Years 1965-1986			
Day	gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>		gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>		gm Cal/cm <sup>2</sup>		BTU/ft <sup>2</sup>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	488	41	1799	152	467	39	1721	145	478	40	1760	149
2	485	41	1786	151	482	41	1776	150	483	41	1781	151
3	444	38	1637	139	461	39	1698	144	452	38	1668	142
4	463	39	1706	145	423	36	1557	133	443	38	1632	139
5	448	38	1650	141	425	36	1565	134	436	37	1608	137
6	454	39	1674	143	419	36	1544	132	436	37	1606	137
7	461	40	1698	146	438	38	1615	139	449	39	1655	142
8	464	40	1709	147	458	39	1689	145	461	40	1699	146
9	440	38	1621	140	418	36	1542	133	429	37	1581	137
10	447	39	1647	143	409	35	1507	130	429	37	1580	137
11	443	38	1634	142	440	38	1621	141	442	38	1627	141
12	454	40	1674	146	447	39	1647	143	450	39	1660	145
13	438	38	1613	141	444	39	1636	143	440	38	1623	142
14	437	38	1610	141	441	39	1626	142	439	38	1618	142
15	438	39	1615	142	418	37	1541	135	428	38	1578	139
16	424	37	1562	138	399	35	1472	130	412	36	1519	134
17	432	38	1591	141	409	36	1508	133	420	37	1549	137
18	410	36	1513	134	423	37	1560	138	417	37	1535	136
19	404	36	1491	132	379	34	1396	124	392	35	1444	128
20	397	35	1462	130	390	35	1436	128	393	35	1449	129
21	407	36	1500	134	394	35	1452	130	401	36	1476	132
22	407	37	1502	135	373	33	1376	123	390	35	1439	129
23	379	34	1398	126	393	35	1450	130	386	35	1423	128
24	393	35	1448	130	389	35	1435	129	391	35	1442	130
25	389	35	1434	130	400	36	1475	133	395	36	1454	131
26	390	35	1438	130	363	33	1337	121	377	34	1388	126
27	392	36	1444	131	369	34	1362	124	381	35	1403	127
28	388	35	1431	130	382	35	1407	128	385	35	1420	129
29	389	36	1434	131	377	34	1390	127	383	35	1412	129
30	383	35	1410	129	380	35	1401	128	382	35	1406	129
31	399	37	1469	135	373	34	1375	126	385	35	1420	130

**TABLE E-11. SOLAR RADIATION. VERTICAL EPFLEY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

**November**

Day	Years 1965-1975				Years 1976-1986				Years 1965-1986			
	<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	372	34	1369	126	381	35	1403	129	376	35	1386	128
2	380	35	1399	129	381	35	1406	130	380	35	1402	129
3	378	35	1392	129	369	34	1359	126	373	34	1376	127
4	366	34	1350	125	359	33	1322	123	363	34	1336	124
5	352	33	1296	121	349	32	1287	120	350	33	1292	120
6	354	33	1305	122	316	29	1164	109	336	31	1238	115
7	344	32	1269	119	332	31	1222	114	338	32	1245	116
8	346	32	1277	120	330	31	1217	114	338	32	1247	117
9	352	33	1295	122	344	32	1269	119	348	33	1282	120
10	344	32	1268	119	313	29	1152	108	328	31	1210	114
11	325	31	1198	113	321	30	1185	112	323	30	1191	112
12	291	28	1074	102	322	30	1187	112	308	29	1133	107
13	311	29	1147	109	332	31	1224	116	321	30	1184	112
14	308	29	1134	108	328	31	1210	115	318	30	1172	111
15	291	28	1071	102	327	31	1204	115	309	29	1138	108
16	296	28	1092	104	313	30	1153	110	305	29	1122	107
17	315	30	1159	111	270	26	993	95	292	28	1076	103
18	303	29	1116	107	303	29	1116	107	303	29	1116	107
19	327	31	1204	116	310	30	1143	110	318	31	1173	113
20	293	28	1080	104	316	30	1164	112	304	29	1122	108
21	296	29	1091	105	299	29	1103	106	298	29	1097	106
22	287	28	1057	102	289	28	1065	103	288	28	1061	103
23	298	29	1097	106	292	28	1074	104	295	29	1086	105
24	296	29	1090	106	272	26	1003	97	284	28	1046	102
25	311	30	1146	111	277	27	1021	99	293	29	1080	105
26	274	27	1010	98	308	30	1135	111	291	28	1072	104
27	285	28	1050	102	288	28	1062	104	286	28	1056	103
28	280	27	1032	101	275	27	1015	99	278	27	1024	100
29	279	27	1030	101	270	26	995	98	275	27	1015	100
30	267	26	985	97	280	27	1031	101	273	27	1008	99

**TABLE E-12. SOLAR RADIATION. VERTICAL EPPLEY  
DAILY AND HOURLY AVERAGES BY MONTH  
(PERIOD OF RECORD: 1965 - 1986)  
US ARMY YUMA PROVING GROUND, AZ**

December												
Years 1965-1975					Years 1976-1986				Years 1965-1986			
Day	<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>		<u>gm Cal/cm<sup>2</sup></u>		<u>BTU/ft<sup>2</sup></u>	
	day	hr	day	hr	day	hr	day	hr	day	hr	day	hr
1	298	29	1097	108	286	28	1054	104	292	29	1075	106
2	281	28	1036	102	269	26	990	98	275	27	1013	100
3	278	27	1025	101	268	26	986	97	273	27	1006	99
4	251	25	926	91	272	27	1001	99	261	26	964	95
5	289	29	1064	105	247	24	910	90	268	26	987	98
6	280	28	1031	102	278	28	1025	102	279	28	1028	102
7	273	27	1006	100	273	27	1006	100	273	27	1006	100
8	263	26	969	96	262	26	967	96	263	26	968	96
9	268	27	987	98	258	26	951	94	263	26	970	96
10	259	26	954	95	262	26	967	96	261	26	960	95
11	282	28	1039	103	255	25	940	94	268	27	989	98
12	274	27	1012	101	248	25	914	91	263	26	968	96
13	274	27	1009	101	267	27	986	98	271	27	997	99
14	251	25	927	92	277	28	1021	102	265	26	976	97
15	256	26	944	94	286	29	1054	105	271	27	999	100
16	233	23	858	86	260	26	956	95	246	25	907	91
17	237	24	872	87	247	25	912	91	242	24	892	89
18	245	24	904	90	257	26	948	95	251	25	926	92
19	258	26	952	95	258	26	953	95	258	26	952	95
20	240	24	883	88	260	26	957	96	250	25	920	92
21	229	23	846	85	259	26	954	95	244	24	900	90
22	235	23	865	86	253	25	934	93	244	24	899	90
23	259	26	956	96	232	23	855	86	246	25	905	91
24	258	26	952	95	263	26	971	97	261	26	961	96
25	241	24	890	89	242	24	890	89	242	24	890	89
26	237	24	873	87	214	21	789	79	226	23	833	83
27	251	25	925	92	239	24	880	88	245	24	903	90
28	249	25	918	92	241	24	887	88	245	24	901	90
29	267	27	985	98	229	23	845	84	249	25	918	92
30	266	27	981	98	237	24	873	87	251	25	927	92
31	249	25	919	92	219	22	806	80	234	23	862	86

**APPENDIX F. SUNRISE AND SUNSET TABLES**  
**US ARMY YUMA PROVING GROUND, AZ**

**TABLE F-1. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

January

<u>Date</u>	<u>Local Sunrise</u>	<u>Standard Time Sunset</u>	<u>Daylight Hrs</u>	<u>Min</u>	<u>X</u>
1	0740	1743	10	03	10.05
2	0740	1744	10	04	10.07
3	0740	1745	10	05	10.08
4	0741	1746	10	05	10.08
5	0741	1746	10	05	10.08
6	0741	1747	10	06	10.10
7	0741	1748	10	07	10.12
8	0741	1749	10	08	10.13
9	0741	1750	10	09	10.15
10	0741	1751	10	10	10.17
11	0741	1751	10	10	10.17
12	0741	1752	10	11	10.18
13	0741	1753	10	12	10.20
14	0740	1754	10	14	10.23
15	0740	1755	10	15	10.25
16	0740	1756	10	16	10.27
17	0740	1757	10	19	10.28
18	0739	1758	10	19	10.32
19	0739	1759	10	20	10.33
20	0739	1800	10	21	10.35
21	0738	1801	10	23	10.38
22	0738	1802	10	24	10.40
23	0738	1803	10	25	10.42
24	0737	1803	10	26	10.43
25	0737	1804	10	27	10.45
26	0736	1805	10	29	10.48
27	0736	1806	10	30	10.50
28	0735	1807	10	32	10.53
29	0735	1808	10	33	10.55
30	0734	1809	10	35	10.58
31	0734	1810	10	36	10.60

NOTE: Column X is sunlight calculated in hours and hundredths of hours.

**TABLE F-2. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

February

<u>Date</u>	<u>Local Standard Time</u>		<u>Daylight</u>		<u>X</u>
	<u>Sunrise</u>	<u>Sunset</u>	<u>Hrs</u>	<u>Min</u>	
1	0733	1811	10	38	10.63
2	0732	1812	10	40	10.67
3	0732	1813	10	41	10.68
4	0731	1814	10	43	10.72
5	0730	1814	10	44	10.73
6	0729	1815	10	46	10.77
7	0729	1816	10	47	10.78
8	0728	1817	10	49	10.82
9	0727	1818	10	51	10.85
10	0726	1819	10	53	10.88
11	0725	1820	10	55	10.92
12	0724	1821	10	57	10.95
13	0724	1822	10	58	10.97
14	0723	1822	10	59	10.98
15	0722	1823	11	01	11.02
16	0721	1824	11	03	11.05
17	0720	1825	11	05	11.08
18	0719	1826	11	07	11.12
19	0718	1827	11	09	11.15
20	0717	1827	11	10	11.17
21	0716	1828	11	12	11.20
22	0715	1829	11	14	11.23
23	0713	1830	11	17	11.28
24	0712	1831	11	19	11.32
25	0711	1832	11	21	11.35
26	0710	1832	11	22	11.37
27	0709	1833	11	24	11.40
28	0708	1834	11	26	11.43
29	0707	1835	11	28	11.47

NOTE: Column X is sunlight calculated in hours and hundredths of hours.



**TABLE F-3. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

**March**

<u>Date</u>	<u>Sunrise</u>	<u>Sunset</u>	<u>Daylight</u> <u>Hrs Min</u>	<u>X</u>
1	0707	1835	11 28	11.47
2	0705	1836	11 31	11.52
3	0704	1837	11 33	11.55
4	0703	1837	11 34	11.57
5	0702	1838	11 36	11.60
6	0700	1839	11 39	11.65
7	0659	1840	11 41	11.68
8	0658	1840	11 42	11.70
9	0657	1841	11 44	11.73
10	0655	1842	11 47	11.78
11	0654	1843	11 49	11.82
12	0653	1844	11 51	11.85
13	0651	1844	11 53	11.88
14	0650	1845	15 55	11.92
15	0649	1846	16 57	11.95
16	0648	1847	17 59	11.95
17	0646	1847	17 01	12.02
18	0645	1848	18 03	12.05
19	0644	1849	19 05	12.08
20	0642	1849	19 07	12.12
21	0641	1850	10 09	12.15
22	0640	1851	11 11	12.18
23	0638	1852	12 14	12.23
24	0637	1852	12 15	12.25
25	0636	1853	13 17	12.28
26	0634	1854	14 20	12.33
27	0633	1855	15 22	12.37
28	0332	1855	15 23	12.38
29	0630	1856	16 26	12.43
30	0629	1857	17 28	12.47
31	0628	1857	17 29	12.48

NOTE: Column X is sunlight calculated in hours and hundredths of hours.

**TABLE F-4. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

April

<u>Date</u>	<u>Sunrise</u>	<u>Sunset</u>	<u>Daylight</u>		<u>X</u>
			<u>Hrs</u>	<u>Min</u>	
1	0626	1858	12	32	12.53
2	0625	1859	12	34	12.57
3	0624	1900	12	36	12.60
4	0622	1900	12	38	12.63
5	0621	1901	12	40	12.67
6	0620	1902	12	42	12.70
7	0619	1902	12	43	12.72
8	0617	1903	12	46	12.77
9	0616	1904	12	48	12.80
10	0615	1905	12	50	12.83
11	0614	1905	12	51	12.85
12	0612	1906	12	54	12.90
13	0611	1907	12	56	12.93
14	0610	1907	12	57	12.95
15	0609	1908	12	59	12.98
16	0607	1909	13	02	13.03
17	0606	1909	13	03	13.05
18	0605	1910	13	05	13.08
19	0604	1911	13	07	13.12
20	0603	1912	13	09	13.15
21	0602	1912	13	10	13.17
22	0601	1913	13	12	13.20
23	0600	1914	13	14	13.23
24	0559	1914	13	15	13.25
25	0557	1915	13	18	13.30
26	0556	1916	13	20	13.33
27	0555	1916	13	21	13.35
28	0554	1917	13	28	13.38
29	0553	1918	13	25	13.42
30	0552	1919	13	27	13.45

NOTE: Column X is sunlight calculated in hours and hundredths of hours.

**TABLE F-5. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

May

<u>Date</u>	<u>Sunrise</u>	<u>Sunset</u>	<u>Daylight</u>		<u>X</u>
			<u>Hrs</u>	<u>Min</u>	
1	0551	1919	13	28	13.47
2	0550	1920	13	30	13.50
3	0550	1921	13	31	13.52
4	0549	1921	13	32	13.53
5	0548	1922	13	34	13.57
6	0547	1923	13	36	13.60
7	0546	1924	13	38	13.63
8	0545	1924	13	39	13.65
9	0544	1925	13	41	13.68
10	0544	1926	13	42	13.70
11	0543	1926	13	43	13.72
12	0542	1927	13	45	13.75
13	0541	1928	13	47	13.78
14	0541	1929	13	48	13.80
15	0540	1929	13	49	13.82
16	0539	1930	13	51	13.85
17	0539	1931	13	52	13.87
18	0538	1931	13	53	13.88
19	0537	1932	13	55	13.92
20	0537	1933	13	56	13.93
21	0536	1933	13	57	13.95
22	0535	1934	13	59	13.98
23	0535	1935	14	00	14.00
24	0534	1935	14	01	14.02
25	0534	1936	14	02	14.03
26	0534	1937	14	03	14.05
27	0533	1937	14	04	14.07
28	0533	1938	14	05	14.08
29	0532	1939	14	07	14.12
30	0532	1939	14	07	14.12
31	0532	1940	14	08	14.13

NOTE: Column X is sunlight calculated in hours and hundredths of hours.

**TABLE F-6. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

June

<u>Date</u>	<u>Sunrise</u>	<u>Sunset</u>	<u>Daylight</u> <u>Hrs Min</u>	<u>X</u>
1	0532	1940	14 08	14.13
2	0531	1941	14 10	14.17
3	0531	1942	14 11	14.18
4	0531	1942	14 11	14.18
5	0530	1943	14 13	14.22
6	0530	1943	14 13	14.22
7	0530	1944	14 14	14.23
8	0530	1944	14 14	14.23
9	0530	1945	14 15	14.25
10	0530	1945	14 15	14.25
11	0530	1946	14 16	14.27
12	0530	1946	14 16	14.27
13	0530	1946	14 16	14.27
14	0530	1947	14 17	14.28
15	0530	1947	14 17	14.28
16	0530	1947	14 17	14.28
17	0530	1948	14 18	14.30
18	0530	1948	14 18	14.30
19	0530	1948	14 18	14.30
20	0530	1948	14 18	14.30
21	0530	1948	14 18	14.30
22	0531	1949	14 18	14.30
23	0531	1949	14 18	14.30
24	0531	1949	14 18	14.30
25	0531	1949	14 18	14.30
26	0532	1950	14 18	14.30
27	0532	1950	14 18	14.30
28	0533	1950	14 17	14.28
29	0533	1950	14 17	14.28
30	0533	1950	14 17	14.28

NOTE: Column X is sunlight calculated in hours and hundredths of hours.

**TABLE F-7. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

July

<u>Date</u>	<u>Sunrise</u>	<u>Sunset</u>	<u>Daylight</u>		<u>X</u>
			<u>Hrs</u>	<u>Min</u>	
1	0534	1950	14	16	14.27
2	0534	1950	14	16	14.27
3	0535	1949	14	14	14.23
4	0535	1949	14	14	14.23
5	0536	1949	14	13	14.22
6	0536	1949	14	13	14.22
7	0536	1949	14	13	14.22
8	0537	1949	14	12	14.20
9	0537	1948	14	11	14.18
10	0538	1948	14	10	14.17
11	0539	1948	14	09	14.15
12	0539	1948	14	09	14.15
13	0540	1947	14	07	14.12
14	0540	1947	14	07	14.12
15	0541	1947	14	06	14.10
16	0542	1946	14	04	14.07
17	0542	1946	14	04	14.07
18	0543	1945	14	02	14.03
19	0543	1945	14	02	14.03
20	0544	1944	14	00	14.00
21	0545	1944	13	59	13.98
22	0545	1943	13	58	13.97
23	0546	1942	13	56	13.93
24	0547	1942	13	55	13.92
25	0547	1941	13	54	13.90
26	0548	1941	13	53	13.88
27	0549	1940	13	51	13.85
28	0549	1939	13	50	13.83
29	0550	1938	13	48	13.80
30	0551	1938	13	47	13.78
31	0551	1937	13	46	13.77

NOTE: Column X is sunlight calculated in hours and hundredths of hours.

**TABLE F-8. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

August

<u>Date</u>	<u>Sunrise</u>	<u>Sunset</u>	<u>Daylight</u>		<u>X</u>
			<u>Hrs</u>	<u>Min</u>	
1	0552	1936	13	44	13.73
2	0553	1935	13	42	13.70
3	0553	1935	13	42	13.70
4	0554	1934	13	40	13.67
5	0555	1933	13	38	13.63
6	0555	1932	13	37	13.62
7	0556	1931	13	35	13.58
8	0557	1930	13	33	13.55
9	0557	1929	13	32	13.53
10	0558	1928	13	30	13.50
11	0559	1927	13	28	13.47
12	0559	1926	13	27	13.45
13	0600	1925	13	25	13.42
14	0601	1924	13	23	13.38
15	0601	1923	13	22	13.37
16	0602	1922	13	20	13.33
17	0603	1921	13	18	13.30
18	0603	1920	13	17	13.28
19	0604	1919	13	15	13.25
20	0604	1918	13	14	13.23
21	0605	1917	13	12	13.20
22	0606	1916	13	10	13.17
23	0606	1914	13	08	13.13
24	0607	1913	13	06	13.10
25	0608	1912	13	04	13.07
26	0608	1911	13	03	13.05
27	0609	1910	13	01	13.02
28	0610	1908	12	58	12.97
29	0610	1907	12	57	12.95
30	0611	1906	12	55	12.92
31	0612	1905	12	53	12.88

NOTE: Column X is sunlight calculated in hours and hundredths of hours.

**TABLE F-9. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

September

<u>Date</u>	<u>Sunrise</u>	<u>Sunset</u>	<u>Daylight</u> <u>Hrs Min</u>	<u>X</u>
1	0612	1903	12 51	12.85
2	0613	1902	12 49	12.82
3	0614	1901	12 47	12.78
4	0614	1859	12 45	12.75
5	0615	1858	12 43	12.72
6	0616	1857	12 41	12.68
7	0616	1855	12 39	12.65
8	0617	1854	12 37	12.62
9	0617	1853	12 36	12.60
10	0618	1851	12 33	12.55
11	0619	1850	12 31	12.52
12	0619	1849	12 30	12.50
13	0620	1847	12 27	12.45
14	0621	1846	12 25	12.42
15	0621	1845	12 24	12.40
16	0622	1843	12 21	12.35
17	0623	1842	12 19	12.32
18	0623	1841	12 18	12.30
19	0624	1839	12 15	12.25
20	0625	1838	12 13	12.22
21	0625	1837	12 12	12.20
22	0626	1835	12 09	12.15
23	0627	1834	12 07	12.12
24	0627	1833	12 06	12.10
25	0628	1831	12 03	12.05
26	0629	1830	12 01	12.02
27	0629	1828	11 59	11.98
28	0630	1827	11 57	11.95
29	0631	1826	11 55	11.92
30	0631	1824	11 53	11.88

NOTE: Column X is sunlight calculated in hours and hundredths of hours.

**TABLE F-10. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

October

<u>Date</u>	<u>Sunrise</u>	<u>Sunset</u>	<u>Daylight</u> <u>Hrs Min</u>	<u>X</u>
1	0632	1823	11 51	11.85
2	0633	1822	11 49	11.82
3	0634	1821	11 47	11.78
4	0634	1819	11 45	11.75
5	0635	1818	11 43	11.72
6	0635	1816	11 41	11.68
7	0636	1815	11 39	11.65
8	0637	1814	11 37	11.62
9	0638	1813	11 35	11.58
10	0638	1811	11 33	11.55
11	0639	1810	11 31	11.52
12	0640	1809	11 29	11.48
13	0641	1808	11 27	11.45
14	0641	1806	11 25	11.42
15	0642	1805	11 23	11.38
16	0643	1804	11 21	11.35
17	0644	1803	11 19	11.32
18	0644	1802	11 18	11.30
19	0645	1801	11 16	11.27
20	0646	1759	11 13	11.22
21	0647	1758	11 11	11.18
22	0648	1757	11 09	11.15
23	0648	1756	11 08	11.13
24	0649	1755	11 06	11.10
25	0650	1754	11 04	11.07
26	0651	1753	11 02	11.03
27	0651	1752	11 01	11.02
28	0652	1751	10 59	10.98
29	0653	1750	10 57	10.95
30	0654	1749	10 55	10.92
31	0655	1748	10 53	10.88

NOTE: Column X is sunlight calculated in hours and hundredths of hours.



**TABLE F-11. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

**November**

<u>Date</u>	<u>Sunrise</u>	<u>Sunset</u>	<u>Daylight</u> <u>Hrs Min</u>	<u>X</u>
1	0655	1747	10 52	10.87
2	0656	1747	10 51	10.85
3	0657	1746	10 49	10.82
4	0658	1745	10 47	10.78
5	0659	1744	10 45	10.75
6	0700	1743	10 43	10.72
7	0701	1743	10 42	10.70
8	0701	1742	10 41	10.68
9	0702	1741	10 39	10.65
10	0703	1741	10 38	10.63
11	0704	1740	10 36	10.60
12	0705	1739	10 34	10.57
13	0706	1739	10 33	10.55
14	0707	1738	10 31	10.52
15	0708	1738	10 30	10.50
16	0708	1737	10 29	10.48
17	0709	1736	10 27	10.45
18	0710	1736	10 26	10.43
19	0711	1736	10 25	10.42
20	0712	1735	10 23	10.38
21	0713	1735	10 22	10.37
22	0714	1734	10 20	10.33
23	0715	1734	10 19	10.32
24	0716	1734	10 18	10.30
25	0716	1733	10 17	10.28
26	0717	1733	10 16	10.27
27	0718	1733	10 15	10.25
28	0719	1733	10 14	10.23
29	0720	1732	10 12	10.20
30	0721	1732	10 11	10.18

NOTE: Column X is sunlight calculated in hours and hundredths of hours.

**TABLE F-12. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, AZ**

December

<u>Date</u>	<u>Sunrise</u>	<u>Sunset</u>	<u>Daylight</u>		<u>X</u>
			<u>Hrs</u>	<u>Min</u>	
1	0722	1732	10	10	10.17
2	0723	1732	10	09	10.15
3	0723	1732	10	09	10.15
4	0724	1732	10	08	10.13
5	0725	1732	10	07	10.12
6	0726	1732	10	06	10.10
7	0727	1732	10	05	10.08
8	0727	1732	10	05	10.08
9	0728	1732	10	04	10.07
10	0729	1733	10	04	10.07
11	0730	1733	10	03	10.05
12	0730	1733	10	03	10.05
13	0731	1733	10	02	10.03
14	0732	1734	10	02	10.03
15	0732	1734	10	02	10.03
16	0733	1734	10	01	10.02
17	0734	1735	10	01	10.02
18	0734	1735	10	01	10.02
19	0734	1735	10	01	10.02
20	0735	1736	10	01	10.02
21	0736	1736	10	00	10.00
22	0736	1736	10	00	10.00
23	0737	1737	10	00	10.00
24	0737	1738	10	01	10.02
25	0737	1738	10	01	10.02
26	0738	1739	10	01	10.02
27	0739	1740	10	01	10.02
28	0739	1740	10	01	10.02
29	0739	1741	10	02	10.03
30	0740	1742	10	02	10.03
31	0740	1742	10	02	10.03

NOTE: Column X is sunlight calculated in hours and hundredths of hours.

**APPENDIX C. RECORDS AND AVERAGES OF INTEREST  
US ARMY YUMA PROVING GROUND, AZ**

**LIST OF RECORDS AND AVERAGES OF INTEREST**  
**(PERIOD OF RECORD: 1954 - 1986)**  
**US ARMY YUMA PROVING GROUND, AZ**

**PRECIPITATION**

Wettest year	1965 & 1984	6.42 IN
Driest year	1956	0.21 IN
Wettest month	OCT 1972	3.78 IN
Maximum in 24 hours	6 OCT 1972	3.02 IN
Month with the highest average rainfall	AUG	0.49 IN
Month with the lowest average rainfall	MAY	0.04 IN

**WET PERIODS (Period of record 1958 - 1986)**

Longest consecutive period with measurable precipitation

8 Aug 1983 through 12 Aug 1983 5 days

Longest consecutive period with precipitation in any form

23 Dec 1977 through 28 Dec 1977 6 days

**THUNDERSTORMS (Average number of days)**

December through February	1
March through May	1
June through August	7
September through November	3

**DROUGHT (Period of record: 1958 - 1986)**

Without even a trace of precipitation:

5 Sep 1980 through 11 Jan 1981	129 days
10 Mar 1962 through 20 Jul 1962	121 days
21 Mar 1974 through 13 Jul 1974	115 days

Without a measurable amount of rain:

28 Jan 1961 through 1 Aug 1961	186 days
26 Dec 1971 through 5 Jun 1972	163 days

# ANNUAL AVERAGE SKY CONDITION DAYS (365-DAY YEAR)

Clear (0.0 to 0.3 sky cover)	245	67.12%
Partly cloudy (0.4 to 0.7 sky cover)	86	23.56%
Cloudy (0.8 to 1.0 sky cover)	34	9.32%

## SKY CONDITION

Most clear days	1975	284
Fewest clear days	1957	209
Fewest partly cloudy days	1975	67
Most partly cloudy days	1970	108
Fewest cloudy days	1973	9
Most cloudy days	1957	67

## TEMPERATURES

Maximum - highest annual	1954	89.45
Maximum - lowest annual	1971	84.93
Minimum - highest annual	1978	61.96
Minimum - lowest annual	1975	57.67
Highest - any day	1957, 57, 58, 81, 85	118
Lowest - any day	1971	23
Daily average maximum		86.87
Daily average minimum		59.83

## Maximum temperatures (Same calendar year)

	- or >100	- or >105	- or >110	- or >115
Earliest date	3 Apr 61	5 May 58	11 May 60	28 May 83
Latest date	24 Oct 59	14 Oct 78	2 Oct 80	9 Sep 79

## Minimum temperatures (From autumn through spring)

	- or < 40	- or < 32	- or < 30	- or < 25
Earliest date	30 Oct 71	17 Nov 58	8 Dec 78	3 Jan 74
Latest date	3 Apr 77	13 Mar 56	28 Feb 62	12 Jan 62
Latest date in year before reaching 100				13 Jun 71

CONSECUTIVE DAYS - TEMPERATURES:

Maximum equal to or greater than 100 degrees (28 May through 5 Sep 78)	102
Maximum equal to or greater than 105 degrees (18 Jun through 15 Jul 57 and 12 Jun through 9 Jul 60)	28
Maximum equal to or greater than 110 degrees (16 through 26 JUN 81)	11
Maximum equal to or greater than 115 degrees (8 through 11 Jul 58 ; 19 through 22 Jun 60; 26 through 29 Aug 81)	4
Minimum equal to or less than 40 degrees (6 Jan through 1 Feb 64)	27
Minimum equal to or less than 32 degrees (12 through 18 Jan 63 and 4 through 10 Jan 71)	7
Minimum equal to or less than 30 degrees (5 through 10 Jan 71)	6
Minimum equal to or less than 25 degrees (7 and 8 Jan 71)	2

DATES WITH MAXIMUM TEMPERATURE NEVER LOWER THAN 100 DEGREES:

30 June; 4,9,10,12,25 July and 8 August.

DAILY AVERAGE TEMPERATURES:

May was an average of +17.68 deg fahrenheit warmer than April in 1984.

November was an average of -23.53 deg fahrenheit colder than October 1964.

SURFACE PRESSURE (Period of record: 1957 - 1986)

Highest	9 Dec '78	1024.9 mbars
Lowest	3 Mar '83	981.0 mbars

MAXIMUM WIND GUST (Period of record: 1957 - 1986)

20 March 1970	71 mi/h
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APPENDIX H. THE CLIMATE CALENDAR  
US ARMY YUMA PROVING GROUND, AZ

Longitude: 114(Deg) 24' W  
Latitude: 32(Deg) 50' N

Elevation: 98 m (324 ft)

The record maximum and minimum temperatures and any changes in record rainfall are shown for the months of January through October 1987. The average temperatures, both maximum and minimum for each date are figured for the 1954 - 1986 time period only. Failure to average in the 1987 temperatures should have little if any effect on the printed averages due to the 33-yr period of the averages.

# US ARMY YUMA PROVING GROUND, ARIZONA

1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1987  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

JANUARY

AVG. HIGH HIGHEST YEAR	65 81 81	AVG. HIGH HIGHEST YEAR	64 82 81	AVG. HIGH HIGHEST YEAR	64 78 81	AVG. HIGH HIGHEST YEAR	65 78 81	AVG. HIGH HIGHEST YEAR	66 78 81	AVG. HIGH HIGHEST YEAR	66 78 54	AVG. HIGH HIGHEST YEAR	66 82 62
1		2		3		4		5		6		7	
AVG. LOW LOWEST YEAR	41 26 76	AVG. LOW LOWEST YEAR	39 29 60	AVG. LOW LOWEST YEAR	40 24 74	AVG. LOW LOWEST YEAR	38 29 74	AVG. LOW LOWEST YEAR	41 29 72	AVG. LOW LOWEST YEAR	41 27 71;72	AVG. LOW LOWEST YEAR	42 25 71
AVG. HIGH HIGHEST YEAR	67 82 62	AVG. HIGH HIGHEST YEAR	66 79 62	AVG. HIGH HIGHEST YEAR	67 77 56	AVG. HIGH HIGHEST YEAR	67 79 86	AVG. HIGH HIGHEST YEAR	67 81 83	AVG. HIGH HIGHEST YEAR	67 77 80;83	AVG. HIGH HIGHEST YEAR	68 79 83
8		9		10		11		12		13		14	
AVG. LOW LOWEST YEAR	41 23 71	AVG. LOW LOWEST YEAR	42 26 71	AVG. LOW LOWEST YEAR	42 25 64	AVG. LOW LOWEST YEAR	42 30 54	AVG. LOW LOWEST YEAR	40 25 62	AVG. LOW LOWEST YEAR	43 28 63	AVG. LOW LOWEST YEAR	43 26 64
AVG. HIGH HIGHEST YEAR	69 78 67	AVG. HIGH HIGHEST YEAR	70 82 76	AVG. HIGH HIGHEST YEAR	70 82 76	AVG. HIGH HIGHEST YEAR	70 85 71	AVG. HIGH HIGHEST YEAR	69 89 71	AVG. HIGH HIGHEST YEAR	68 86 71	AVG. HIGH HIGHEST YEAR	68 79 71
15		16		17		18		19		20		21	
AVG. LOW LOWEST YEAR	44 28 63	AVG. LOW LOWEST YEAR	45 28 63	AVG. LOW LOWEST YEAR	45 31 63	AVG. LOW LOWEST YEAR	44 28 87	AVG. LOW LOWEST YEAR	43 35 67	AVG. LOW LOWEST YEAR	43 28 63	AVG. LOW LOWEST YEAR	43 30 73
AVG. HIGH HIGHEST YEAR	67 77 70	AVG. HIGH HIGHEST YEAR	68 77 68;86	AVG. HIGH HIGHEST YEAR	68 76 59;68	AVG. HIGH HIGHEST YEAR	69 79 59	AVG. HIGH HIGHEST YEAR	70 81 71	AVG. HIGH HIGHEST YEAR	69 82 71	AVG. HIGH HIGHEST YEAR	70 84 71
22		23		24		25		26		27		28	
AVG. LOW LOWEST YEAR	43 31 63;87	AVG. LOW LOWEST YEAR	43 32 66	AVG. LOW LOWEST YEAR	43 31 66	AVG. LOW LOWEST YEAR	43 30 64	AVG. LOW LOWEST YEAR	43 30 64	AVG. LOW LOWEST YEAR	44 32 64	AVG. LOW LOWEST YEAR	44 33 72
AVG. HIGH HIGHEST YEAR	70 84 71	AVG. HIGH HIGHEST YEAR	69 83 71	AVG. HIGH HIGHEST YEAR	70 84 54	AVG. HIGH HIGHEST YEAR	70 84 54	AVG. HIGH HIGHEST YEAR	70 84 54	AVG. HIGH HIGHEST YEAR	70 84 54	AVG. HIGH HIGHEST YEAR	70 84 54
29		30		31		32		33		34		35	
AVG. LOW LOWEST YEAR	43 33 79	AVG. LOW LOWEST YEAR	43 31 69	AVG. LOW LOWEST YEAR	44 36 57;69	AVG. LOW LOWEST YEAR	44 36 57;69	AVG. LOW LOWEST YEAR	44 36 57;69	AVG. LOW LOWEST YEAR	44 36 57;69	AVG. LOW LOWEST YEAR	44 36 57;69
												(IN INCHES)	
												MONTHLY AVG	
												0.46+	
												2.26 '79	
												1.35;16th '79	
												24 HR MAX	
												AVERAGE NO. OF DAYS CLEAR	
												17	
												PARTLY CLOUDY	
												9	
												AVERAGE SKY COVER	
												4/10	



1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1987

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# US ARMY YUMA PROVING GROUND, ARIZONA

1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1987  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

MARCH

AVG. HIGH HIGHEST YEAR	75 92 86	AVG. HIGH HIGHEST YEAR	74 88 86	AVG. HIGH HIGHEST YEAR	73 86 56;59; 72;86	AVG. HIGH HIGHEST YEAR	73 92 72	AVG. HIGH HIGHEST YEAR	74 95 72	AVG. HIGH HIGHEST YEAR	75 93 72	AVG. HIGH HIGHEST YEAR	76 91 72
1		2		3		4		5		6		7	
AVG. LOW LOWEST YEAR	50 35 62	AVG. LOW LOWEST YEAR	49 36 71	AVG. LOW LOWEST YEAR	47 35 71	AVG. LOW LOWEST YEAR	47 35 64	AVG. LOW LOWEST YEAR	48 38 65	AVG. LOW LOWEST YEAR	48 38 65	AVG. LOW LOWEST YEAR	48 37 82
AVG. HIGH HIGHEST YEAR	78 91 72	AVG. HIGH HIGHEST YEAR	78 95 72	AVG. HIGH HIGHEST YEAR	76 95 72	AVG. HIGH HIGHEST YEAR	75 91 72	AVG. HIGH HIGHEST YEAR	75 92 72	AVG. HIGH HIGHEST YEAR	75 90 72	AVG. HIGH HIGHEST YEAR	76 90 72
8		9		10		11		12		13		14	
AVG. LOW LOWEST YEAR	49 35 69	AVG. LOW LOWEST YEAR	50 32 64	AVG. LOW LOWEST YEAR	51 40 58;64	AVG. LOW LOWEST YEAR	51 39 64	AVG. LOW LOWEST YEAR	49 40 69	AVG. LOW LOWEST YEAR	49 32 56	AVG. LOW LOWEST YEAR	50 39 62
AVG. HIGH HIGHEST YEAR	77 93 72	AVG. HIGH HIGHEST YEAR	77 92 72;74	AVG. HIGH HIGHEST YEAR	77 94 72	AVG. HIGH HIGHEST YEAR	77 91 72	AVG. HIGH HIGHEST YEAR	78 91 60	AVG. HIGH HIGHEST YEAR	78 93 60	AVG. HIGH HIGHEST YEAR	80 93 60
15		16		17		18		19		20		21	
AVG. LOW LOWEST YEAR	48 34 62	AVG. LOW LOWEST YEAR	50 38 56	AVG. LOW LOWEST YEAR	51 43 57	AVG. LOW LOWEST YEAR	49 38 54	AVG. LOW LOWEST YEAR	50 40 77	AVG. LOW LOWEST YEAR	52 42 82	AVG. LOW LOWEST YEAR	50 43 64
AVG. HIGH HIGHEST YEAR	79 92 67;86	AVG. HIGH HIGHEST YEAR	80 92 86	AVG. HIGH HIGHEST YEAR	80 92 86	AVG. HIGH HIGHEST YEAR	81 91 81	AVG. HIGH HIGHEST YEAR	80 95 78;86	AVG. HIGH HIGHEST YEAR	81 99 86	AVG. HIGH HIGHEST YEAR	80 94 71
22		23		24		25		26		27		28	
AVG. LOW LOWEST YEAR	52 38 55	AVG. LOW LOWEST YEAR	52 43 55	AVG. LOW LOWEST YEAR	51 45 54;62	AVG. LOW LOWEST YEAR	51 41 64	AVG. LOW LOWEST YEAR	52 39 77	AVG. LOW LOWEST YEAR	54 43 64	AVG. LOW LOWEST YEAR	54 45 72;75
AVG. HIGH HIGHEST YEAR	80 98 71	AVG. HIGH HIGHEST YEAR	82 97 69;71	AVG. HIGH HIGHEST YEAR	82 97 66	AVG. HIGH HIGHEST YEAR	82 97 66	AVG. HIGH HIGHEST YEAR	82 97 66	AVG. HIGH HIGHEST YEAR	82 97 66	AVG. HIGH HIGHEST YEAR	82 97 66
29		30		31									
AVG. LOW LOWEST YEAR	52 43 87	AVG. LOW LOWEST YEAR	52 42 67	AVG. LOW LOWEST YEAR	53 44 77;87	AVG. LOW LOWEST YEAR	53 44 77;87	AVG. LOW LOWEST YEAR	53 44 77;87	AVG. LOW LOWEST YEAR	53 44 77;87	AVG. LOW LOWEST YEAR	53 44 77;87
RAINFALL SNOWFALL (IN INCHES) MONTHLY AVG 0.27+ MONTHLY MAX 1.38, '70 24 HR MAX 0.96;1st, '70 AVERAGE NO. OF DAYS CLEAR 17 PARTLY CLOUDY 10 CLOUDY 4 AVERAGE SKY COVER 4/10													

# US ARMY YUMA PROVING GROUND, ARIZONA

1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1987  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

APRIL

AVG. HIGH HIGHEST YEAR	80 98 66	AVG. HIGH HIGHEST YEAR	79 98 59	AVG. HIGH HIGHEST YEAR	81 100 61	AVG. HIGH HIGHEST YEAR	82 103 61	AVG. HIGH HIGHEST YEAR	84 97 60	AVG. HIGH HIGHEST YEAR	84 97 60	AVG. HIGH HIGHEST YEAR	83 97 85
1		2		3		4		5		6		7	
AVG. LOW LOWEST YEAR	54 40 77	AVG. LOW LOWEST YEAR	52 43 75	AVG. LOW LOWEST YEAR	53 37 77	AVG. LOW LOWEST YEAR	53 42 77	AVG. LOW LOWEST YEAR	53 42 83	AVG. LOW LOWEST YEAR	55 45 58	AVG. LOW LOWEST YEAR	55 44 64
8		9		10		11		12		13		14	
AVG. HIGH HIGHEST YEAR	85 100 85	AVG. HIGH HIGHEST YEAR	84 97 85	AVG. HIGH HIGHEST YEAR	85 96 87	AVG. HIGH HIGHEST YEAR	85 97 85	AVG. HIGH HIGHEST YEAR	85 100 85	AVG. HIGH HIGHEST YEAR	86 103 85	AVG. HIGH HIGHEST YEAR	86 104 85
AVG. LOW LOWEST YEAR	54 42 83	AVG. LOW LOWEST YEAR	55 44 73	AVG. LOW LOWEST YEAR	56 43 75	AVG. LOW LOWEST YEAR	57 46 67	AVG. LOW LOWEST YEAR	56 44 67	AVG. LOW LOWEST YEAR	56 44 83	AVG. LOW LOWEST YEAR	58 50 72;83
15		16		17		18		19		20		21	
AVG. HIGH HIGHEST YEAR	87 102 62;84	AVG. HIGH HIGHEST YEAR	86 103 54	AVG. HIGH HIGHEST YEAR	86 104 54	AVG. HIGH HIGHEST YEAR	84 104 54	AVG. HIGH HIGHEST YEAR	83 101 54	AVG. HIGH HIGHEST YEAR	85 103 58	AVG. HIGH HIGHEST YEAR	85 104 58
AVG. LOW LOWEST YEAR	57 44 70	AVG. LOW LOWEST YEAR	58 44 76	AVG. LOW LOWEST YEAR	57 42 76	AVG. LOW LOWEST YEAR	57 46 75	AVG. LOW LOWEST YEAR	56 45 68	AVG. LOW LOWEST YEAR	57 48 72	AVG. LOW LOWEST YEAR	56 46 73;79
22		23		24		25		26		27		28	
AVG. HIGH HIGHEST YEAR	86 101 58	AVG. HIGH HIGHEST YEAR	87 99 77	AVG. HIGH HIGHEST YEAR	87 100 87	AVG. HIGH HIGHEST YEAR	86 98 81,87	AVG. HIGH HIGHEST YEAR	85 98 73;87	AVG. HIGH HIGHEST YEAR	86 100 73;87	AVG. HIGH HIGHEST YEAR	87 98 59
AVG. LOW LOWEST YEAR	56 43 57	AVG. LOW LOWEST YEAR	57 44 67	AVG. LOW LOWEST YEAR	57 49 60;61;80	AVG. LOW LOWEST YEAR	59 47 64	AVG. LOW LOWEST YEAR	59 49 71	AVG. LOW LOWEST YEAR	58 47 63;84	AVG. LOW LOWEST YEAR	58 46 70
29		30		X		X		X		X		X	
AVG. HIGH HIGHEST YEAR	88 102 59	AVG. HIGH HIGHEST YEAR	89 100 59;65	AVG. HIGH HIGHEST YEAR	89 100 59;65	AVG. HIGH HIGHEST YEAR	89 100 59;65	AVG. HIGH HIGHEST YEAR	89 100 59;65	AVG. HIGH HIGHEST YEAR	89 100 59;65	AVG. HIGH HIGHEST YEAR	89 100 59;65
AVG. LOW LOWEST YEAR	59 44 70	AVG. LOW LOWEST YEAR	60 49 67	AVG. LOW LOWEST YEAR	60 49 67	AVG. LOW LOWEST YEAR	60 49 67	AVG. LOW LOWEST YEAR	60 49 67	AVG. LOW LOWEST YEAR	60 49 67	AVG. LOW LOWEST YEAR	60 49 67
										RECORD TEMPERATURES (°F).			
										MAXIMUM 104(*)			
										MINIMUM 37;3rd, '77			
										AVG MAX 85 AVG MIN 56			
										AVG REL HUMIDITY (27) 2			
										AVG WIND SPEED (KTS) 5			
										PREVAILING WIND DIR W			
										RAINFALL SNOWFALL (IN INCHES)			
										0.13+ -			
										MONTHLY MAX			
										1.89, '65			
										1.46;3rd '75			
										24 HR MAX			
										AVERAGE NO. OF DAYS CLEAR 21			
										PARTLY CLOUDY 6			
										CLOUDY 3			
										AVERAGE SKY COVER 3/10			

(\*) 104:21st, '58; 14th, '85  
17th, 18th '54

# US ARMY YUMA PROVING GROUND, ARIZONA

1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1987  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

MAY

AVG. HIGH 89 HIGHEST 101 YEAR 61;85	AVG. HIGH 90 HIGHEST 103 YEAR 66	AVG. HIGH 90 HIGHEST 103 YEAR 62	AVG. HIGH 88 HIGHEST 100 YEAR 58;62	AVG. HIGH 88 HIGHEST 105 YEAR 58	AVG. HIGH 88 HIGHEST 104 YEAR 63	AVG. HIGH 88 HIGHEST 103 YEAR 63
<b>1</b> AVG. LOW 61 LOWEST 47 YEAR 67	<b>2</b> AVG. LOW 60 LOWEST 49 YEAR 67	<b>3</b> AVG. LOW 61 LOWEST 52 YEAR 55	<b>4</b> AVG. LOW 61 LOWEST 51 YEAR 59;64	<b>5</b> AVG. LOW 60 LOWEST 46 YEAR 64	<b>6</b> AVG. LOW 60 LOWEST 48 YEAR 64	<b>7</b> AVG. LOW 61 LOWEST 52 YEAR 70;75
<b>8</b> AVG. HIGH 90 HIGHEST 102 YEAR 62	<b>9</b> AVG. HIGH 91 HIGHEST 104 YEAR 84	<b>10</b> AVG. HIGH 90 HIGHEST 106 YEAR 60	<b>11</b> AVG. HIGH 92 HIGHEST 110 YEAR 60	<b>12</b> AVG. HIGH 91 HIGHEST 106 YEAR 60;76	<b>13</b> AVG. HIGH 93 HIGHEST 108 YEAR 78	<b>14</b> AVG. HIGH 93 HIGHEST 107 YEAR 76
<b>15</b> AVG. LOW 61 LOWEST 50 YEAR 64	<b>16</b> AVG. LOW 62 LOWEST 54 YEAR 64;79	<b>17</b> AVG. LOW 62 LOWEST 51 YEAR 79	<b>18</b> AVG. LOW 61 LOWEST 48 YEAR 80	<b>19</b> AVG. LOW 61 LOWEST 51 YEAR 83	<b>20</b> AVG. LOW 63 LOWEST 49 YEAR 62	<b>21</b> AVG. LOW 64 LOWEST 54 YEAR 62
<b>22</b> AVG. HIGH 95 HIGHEST 106 YEAR 58	<b>23</b> AVG. HIGH 95 HIGHEST 108 YEAR 83	<b>24</b> AVG. HIGH 95 HIGHEST 107 YEAR 83;84	<b>25</b> AVG. HIGH 95 HIGHEST 109 YEAR 74	<b>26</b> AVG. HIGH 96 HIGHEST 110 YEAR 74	<b>27</b> AVG. HIGH 96 HIGHEST 112 YEAR 83	<b>28</b> AVG. HIGH 97 HIGHEST 117 YEAR 83
<b>29</b> AVG. LOW 65 LOWEST 53 YEAR 71	<b>30</b> AVG. LOW 65 LOWEST 56 YEAR 65	<b>31</b> AVG. LOW 65 LOWEST 52 YEAR 80	<b>32</b> AVG. LOW 65 LOWEST 52 YEAR 80	<b>33</b> AVG. LOW 66 LOWEST 53 YEAR 87	<b>34</b> AVG. LOW 67 LOWEST 54 YEAR 62	<b>35</b> AVG. LOW 66 LOWEST 55 YEAR 62;71
AVG. HIGH 97 HIGHEST 113 YEAR 84	AVG. HIGH 97 HIGHEST 108 YEAR 84	AVG. HIGH 97 HIGHEST 108 YEAR 84	RECORD TEMPERATURES (°F.) MAXIMUM 117:28th,'83 MINIMUM 46:5th,'64 AVG MAX 93 AVG MIN 64 AVG REL HUMIDITY (25) 2 AVG WIND SPEED (KTS) 5 PREVALENT IN W	RAINFALL SNOWFALL (IN INCHES) 0.04 (w) 0.26,'79 0.19(x) AVERAGE NO. OF DAYS CLEAR 24 PARTLY CLOUDY 6 AVERAGE SKY COVER 2/10	MONTHLY AVG MONTHLY MAX 24 HR MAX CLEAR 24 CLOUDY 1	

(w) on rainfall means less than  
(x) 19th,'79 and 27th,'81

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1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1987  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

JUNE

AVG. HIGH HIGHEST YEAR	97 110 77	AVG. HIGH HIGHEST YEAR	98 112 57;60	AVG. HIGH HIGHEST YEAR	98 112 57	AVG. HIGH HIGHEST YEAR	99 111 57	AVG. HIGH HIGHEST YEAR	99 114 57	AVG. HIGH HIGHEST YEAR	98 111 73	AVG. HIGH HIGHEST YEAR	99 115 85
1		2		3		4		5		6		7	
AVG. LOW LOWEST YEAR	67 56 80	AVG. LOW LOWEST YEAR	68 57 83	AVG. LOW LOWEST YEAR	69 57 71	AVG. LOW LOWEST YEAR	69 59 71	AVG. LOW LOWEST YEAR	70 59 71	AVG. LOW LOWEST YEAR	69 62 54;62;68	AVG. LOW LOWEST YEAR	70 59 63
AVG. HIGH HIGHEST YEAR	99 115 85	AVG. HIGH HIGHEST YEAR	99 114 78	AVG. HIGH HIGHEST YEAR	98 111 78	AVG. HIGH HIGHEST YEAR	100 114 56	AVG. HIGH HIGHEST YEAR	101 113 56;79	AVG. HIGH HIGHEST YEAR	102 114 79	AVG. HIGH HIGHEST YEAR	102 117 61
8		9		10		11		12		13		14	
AVG. LOW LOWEST YEAR	69 60 68	AVG. LOW LOWEST YEAR	69 59 65	AVG. LOW LOWEST YEAR	69 60 64	AVG. LOW LOWEST YEAR	69 57 76	AVG. LOW LOWEST YEAR	70 61 76	AVG. LOW LOWEST YEAR	71 62 70	AVG. LOW LOWEST YEAR	71 61 62;67
AVG. HIGH HIGHEST YEAR	102 116 74	AVG. HIGH HIGHEST YEAR	104 115 74	AVG. HIGH HIGHEST YEAR	104 114 81	AVG. HIGH HIGHEST YEAR	105 115 68;78	AVG. HIGH HIGHEST YEAR	105 115 60	AVG. HIGH HIGHEST YEAR	105 116 60	AVG. HIGH HIGHEST YEAR	106 115 60;68;78
15		16		17		18		19		20		21	
AVG. LOW LOWEST YEAR	72 54 62	AVG. LOW LOWEST YEAR	72 58 62	AVG. LOW LOWEST YEAR	73 61 65	AVG. LOW LOWEST YEAR	73 61 79	AVG. LOW LOWEST YEAR	74 60 75	AVG. LOW LOWEST YEAR	74 60 75	AVG. LOW LOWEST YEAR	75 63 75
AVG. HIGH HIGHEST YEAR	107 117 78	AVG. HIGH HIGHEST YEAR	107 115 59;78	AVG. HIGH HIGHEST YEAR	107 118 57	AVG. HIGH HIGHEST YEAR	106 115 61;70	AVG. HIGH HIGHEST YEAR	107 115 74;79;86	AVG. HIGH HIGHEST YEAR	107 117 74;79	AVG. HIGH HIGHEST YEAR	106 115 74;85
22		23		24		25		26		27		28	
AVG. LOW LOWEST YEAR	74 64 82	AVG. LOW LOWEST YEAR	73 64 82	AVG. LOW LOWEST YEAR	76 62 65	AVG. LOW LOWEST YEAR	76 67 65	AVG. LOW LOWEST YEAR	75 59 65	AVG. LOW LOWEST YEAR	76 65 65	AVG. LOW LOWEST YEAR	77 66 65
AVG. HIGH HIGHEST YEAR	106 115 77	AVG. HIGH HIGHEST YEAR	106 113 72;85	AVG. HIGH HIGHEST YEAR	106 113 72;85	AVG. HIGH HIGHEST YEAR	106 113 72;85	AVG. HIGH HIGHEST YEAR	106 113 72;85	AVG. HIGH HIGHEST YEAR	106 113 72;85	AVG. HIGH HIGHEST YEAR	106 113 72;85
29		30		31		32		33		34		35	
AVG. LOW LOWEST YEAR	77 67 83	AVG. LOW LOWEST YEAR	77 69 83	AVG. LOW LOWEST YEAR	77 69 83	AVG. LOW LOWEST YEAR	77 69 83	AVG. LOW LOWEST YEAR	77 69 83	AVG. LOW LOWEST YEAR	77 69 83	AVG. LOW LOWEST YEAR	77 69 83

RECORD TEMPERATURES (°F).	MAXIMUM 118:24th, '57	MINIMUM 54:15th, '62	AVG MAX 103 AVG MIN 72	AVG REL HUMIDITY (23/8)	AVG WIND SPEED (KTS) 5	PREVAILING WIND DIR W&SW
RAINFALL SNOWFALL (IN INCHES)	0.05+	-	1.31, '72	1.30:6th, '72	AVERAGE NO. OF DAYS CLEAR 26	PARTLY CLOUDY 4 CLOUDY 0*
						AVERAGE SKY COVER 2/10

\*= In 21 years only 9 days have been cloudy.

# US ARMY YUMA PROVING GROUND, ARIZONA

1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1987  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

JULY

AVG. HIGH 106 HIGHEST 115 YEAR 85	AVG. HIGH 106 HIGHEST 116 YEAR 85	AVG. HIGH 106 HIGHEST 115 YEAR 85	AVG. HIGH 107 HIGHEST 116 YEAR 72	AVG. HIGH 106 HIGHEST 114 YEAR 83;84	AVG. HIGH 107 HIGHEST 115 YEAR 76	AVG. HIGH 106 HIGHEST 114 YEAR 76
<b>1</b> AVG. LOW 77 LOWEST 65 YEAR 82	<b>2</b> AVG. LOW 77 LOWEST 67 YEAR 54;82	<b>3</b> AVG. LOW 78 LOWEST 68 YEAR 79	<b>4</b> AVG. LOW 78 LOWEST 68 YEAR 61	<b>5</b> AVG. LOW 78 LOWEST 67 YEAR 61	<b>6</b> AVG. LOW 78 LOWEST 69 YEAR 61	<b>7</b> AVG. LOW 79 LOWEST 69 YEAR 55;79
AVG. HIGH 107 HIGHEST 117 YEAR 58	AVG. HIGH 107 HIGHEST 118 YEAR 58	AVG. HIGH 108 HIGHEST 115 YEAR 58	AVG. HIGH 107 HIGHEST 117 YEAR 58	AVG. HIGH 108 HIGHEST 116 YEAR 64;85	AVG. HIGH 107 HIGHEST 114 YEAR 83	AVG. HIGH 107 HIGHEST 114 YEAR 63;78
<b>8</b> AVG. LOW 80 LOWEST 71 YEAR 55;79	<b>9</b> AVG. LOW 80 LOWEST 72 YEAR 87	<b>10</b> AVG. LOW 81 LOWEST 71 YEAR 55	<b>11</b> AVG. LOW 81 LOWEST 71 YEAR 74	<b>12</b> AVG. LOW 80 LOWEST 71 YEAR 74	<b>13</b> AVG. LOW 80 LOWEST 68 YEAR 62	<b>14</b> AVG. LOW 81 LOWEST 73 YEAR 62
AVG. HIGH 107 HIGHEST 113 YEAR 54;60;79;80	AVG. HIGH 106 HIGHEST 117 YEAR 80	AVG. HIGH 105 HIGHEST 114 YEAR 80	AVG. HIGH 106 HIGHEST 116 YEAR 60	AVG. HIGH 106 HIGHEST 116 YEAR 78	AVG. HIGH 106 HIGHEST 115 YEAR 60;78	AVG. HIGH 105 HIGHEST 112 YEAR 63;80
<b>15</b> AVG. LOW 82 LOWEST 70 YEAR 62	<b>16</b> AVG. LOW 82 LOWEST 69 YEAR 62	<b>17</b> AVG. LOW 81 LOWEST 70 YEAR 62	<b>18</b> AVG. LOW 81 LOWEST 70 YEAR 87	<b>19</b> AVG. LOW 81 LOWEST 73 YEAR 58;87	<b>20</b> AVG. LOW 81 LOWEST 73 YEAR 79	<b>21</b> AVG. LOW 82 LOWEST 74 YEAR 73
AVG. HIGH 105 HIGHEST 114 YEAR 63	AVG. HIGH 106 HIGHEST 113 YEAR 59;80	AVG. HIGH 106 HIGHEST 115 YEAR 79	AVG. HIGH 107 HIGHEST 114 YEAR 74	AVG. HIGH 106 HIGHEST 113 YEAR 80	AVG. HIGH 106 HIGHEST 116 YEAR 80	AVG. HIGH 107 HIGHEST 116 YEAR 54;80
<b>22</b> AVG. LOW 81 LOWEST 70 YEAR 87	<b>23</b> AVG. LOW 81 LOWEST 70 YEAR 73	<b>24</b> AVG. LOW 81 LOWEST 71 YEAR 76	<b>25</b> AVG. LOW 82 LOWEST 75 YEAR 65	<b>26</b> AVG. LOW 82 LOWEST 76 YEAR 75	<b>27</b> AVG. LOW 81 LOWEST 72 YEAR 86	<b>28</b> AVG. LOW 83 LOWEST 72 YEAR 87
AVG. HIGH 105 HIGHEST 112 YEAR 72;78	AVG. HIGH 105 HIGHEST 115 YEAR 57	AVG. HIGH 106 HIGHEST 118 YEAR 57	AVG. HIGH 106 HIGHEST 114 YEAR 57	AVG. HIGH 106 HIGHEST 113 YEAR 57	AVG. HIGH 106 HIGHEST 116 YEAR 57	AVG. HIGH 107 HIGHEST 116 YEAR 57
<b>29</b> AVG. LOW 83 LOWEST 76 YEAR 61;65;84	<b>30</b> AVG. LOW 82 LOWEST 68 YEAR 58	<b>31</b> AVG. LOW 82 LOWEST 76 YEAR 58;85	AVG. MAX 106 AVG. MIN 80 AVG. REL. HUMIDITY (33)% AVG. WIND SPEED (KTS) 5 PREVAILING WIND DIR SW	AVG. MAX 106 AVG. MIN 80 AVG. REL. HUMIDITY (33)% AVG. WIND SPEED (KTS) 5 PREVAILING WIND DIR SW	AVG. MAX 106 AVG. MIN 80 AVG. REL. HUMIDITY (33)% AVG. WIND SPEED (KTS) 5 PREVAILING WIND DIR SW	AVG. MAX 106 AVG. MIN 80 AVG. REL. HUMIDITY (33)% AVG. WIND SPEED (KTS) 5 PREVAILING WIND DIR SW
RECORD TEMPERATURES (°F).				RAINFALL SNOWFALL (IN INCHES)		
MAXIMUM 118:31st;57:9th;82				MONTHLY AVG		
MINIMUM 65:1st;82				MONTHLY MAX		
AVG MAX 106 AVG MIN 80 AVG REL HUMIDITY (33)% AVG WIND SPEED (KTS) 5 PREVAILING WIND DIR SW				24 HR MAX		
				AVERAGE NO. OF DAYS		
				PARTLY CLOUDY 9		
				CLOUDY 3		
				AVERAGE SKY COVER 3/10		

# US ARMY YUMA PROVING GROUND, ARIZONA

1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1987

MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

AUGUST

AVG. HIGH 106 HIGHEST 115 YEAR 72	AVG. HIGH 106 HIGHEST 114 YEAR 69	AVG. HIGH 106 HIGHEST 115 YEAR 79	AVG. HIGH 106 HIGHEST 116 YEAR 75	AVG. HIGH 105 HIGHEST 113 YEAR 77	AVG. HIGH 105 HIGHEST 112 YEAR 70	AVG. HIGH 106 HIGHEST 113 YEAR 75
<b>1</b> AVG. LOW 82 LOWEST 75 YEAR 59	<b>2</b> AVG. LOW 82 LOWEST 71 YEAR 76	<b>3</b> AVG. LOW 82 LOWEST 73 YEAR 56;76	<b>4</b> AVG. LOW 80 LOWEST 70 YEAR 56	<b>5</b> AVG. LOW 81 LOWEST 67 YEAR 76	<b>6</b> AVG. LOW 81 LOWEST 70 YEAR 76	<b>7</b> AVG. LOW 81 LOWEST 73 YEAR 57
AVG. HIGH 106 HIGHEST 112 YEAR 80	AVG. HIGH 106 HIGHEST 111 YEAR 65;66;82	AVG. HIGH 106 HIGHEST 112 YEAR 62	AVG. HIGH 105 HIGHEST 114 YEAR 62	AVG. HIGH 105 HIGHEST 113 YEAR 62	AVG. HIGH 105 HIGHEST 113 YEAR 62;83	AVG. HIGH 104 HIGHEST 112 YEAR 56;62
<b>8</b> AVG. LOW 82 LOWEST 72 YEAR 57	<b>9</b> AVG. LOW 82 LOWEST 73 YEAR 83	<b>10</b> AVG. LOW 82 LOWEST 74 YEAR 74;76	<b>11</b> AVG. LOW 82 LOWEST 73 YEAR 74	<b>12</b> AVG. LOW 81 LOWEST 67 YEAR 79	<b>13</b> AVG. LOW 81 LOWEST 71 YEAR 79	<b>14</b> AVG. LOW 80 LOWEST 69 YEAR 54
AVG. HIGH 103 HIGHEST 111 YEAR 62	AVG. HIGH 103 HIGHEST 112 YEAR 69	AVG. HIGH 102 HIGHEST 110 YEAR 60;62;81	AVG. HIGH 103 HIGHEST 114 YEAR 60	AVG. HIGH 103 HIGHEST 112 YEAR 82	AVG. HIGH 104 HIGHEST 113 YEAR 69	AVG. HIGH 104 HIGHEST 115 YEAR 69
<b>15</b> AVG. LOW 78 LOWEST 68 YEAR 76	<b>16</b> AVG. LOW 79 LOWEST 67 YEAR 76	<b>17</b> AVG. LOW 78 LOWEST 70 YEAR 75	<b>18</b> AVG. LOW 78 LOWEST 68 YEAR 76;80	<b>19</b> AVG. LOW 78 LOWEST 68 YEAR 76	<b>20</b> AVG. LOW 79 LOWEST 67 YEAR 79	<b>21</b> AVG. LOW 79 LOWEST 71 YEAR 79
AVG. HIGH 104 HIGHEST 115 YEAR 69	AVG. HIGH 104 HIGHEST 115 YEAR 85	AVG. HIGH 104 HIGHEST 111 YEAR 81	AVG. HIGH 105 HIGHEST 118 YEAR 85	AVG. HIGH 105 HIGHEST 115 YEAR 81	AVG. HIGH 105 HIGHEST 118 YEAR 81	AVG. HIGH 106 HIGHEST 115 YEAR 81
<b>22</b> AVG. LOW 79 LOWEST 68 YEAR 54	<b>23</b> AVG. LOW 78 LOWEST 66 YEAR 68	<b>24</b> AVG. LOW 79 LOWEST 69 YEAR 68	<b>25</b> AVG. LOW 79 LOWEST 67 YEAR 83	<b>26</b> AVG. LOW 78 LOWEST 66 YEAR 78	<b>27</b> AVG. LOW 78 LOWEST 68 YEAR 56	<b>28</b> AVG. LOW 78 LOWEST 69 YEAR 73
AVG. HIGH 106 HIGHEST 116 YEAR 54	AVG. HIGH 105 HIGHEST 115 YEAR 84	AVG. HIGH 104 HIGHEST 114 YEAR 87	RECORD TEMPERATURES (°F). MAXIMUM 118:27th'81;25th'85 MINIMUM 65:31st'57	RAINFALL AVG. 0.49+ MONTHLY MAX 2.19'55	SNOWFALL - MONTHLY MAX 1.75:19th'84	(IN INCHES) MONTHLY AVG 24 HR MAX AVERAGE NO. OF DAYS CLEAR 20 PARTLY CLOUDY 8 CLOUDY 3 AVERAGE SKY COVER 3/10
<b>29</b> AVG. LOW 79 LOWEST 69 YEAR 75	<b>30</b> AVG. LOW 79 LOWEST 68 YEAR 57;62	<b>31</b> AVG. LOW 78 LOWEST 65 YEAR 57	AVG MAX 105 AVG MIN 80 AVG REL HUMIDITY (38)% AVG WIND SPEED (KTS) 5 PREVAILING WIND DIR SSW			

# US ARMY YUMA PROVING GROUND, ARIZONA

1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1987

SEPTEMBER MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

<div>1</div> <div>AVG. HIGH 103 HIGHEST 114 YEAR 69</div> <div>AVG. LOW 77 LOWEST 67 YEAR 66</div>	<div>2</div> <div>AVG. HIGH 103 HIGHEST 114 YEAR 82</div> <div>AVG. LOW 78 LOWEST 68 YEAR 64;80</div>	<div>3</div> <div>AVG. HIGH 104 HIGHEST 111 YEAR 82;83</div> <div>AVG. LOW 78 LOWEST 69 YEAR 64</div>	<div>4</div> <div>AVG. HIGH 103 HIGHEST 112 YEAR 77</div> <div>AVG. LOW 78 LOWEST 65 YEAR 85</div>	<div>5</div> <div>AVG. HIGH 104 HIGHEST 113 YEAR 86</div> <div>AVG. LOW 77 LOWEST 65 YEAR 61;85</div>	<div>6</div> <div>AVG. HIGH 103 HIGHEST 113 YEAR 86</div> <div>AVG. LOW 77 LOWEST 66 YEAR 85</div>	<div>7</div> <div>AVG. HIGH 103 HIGHEST 112 YEAR 77;79</div> <div>AVG. LOW 77 LOWEST 64 YEAR 85</div>	
<div>8</div> <div>AVG. HIGH 103 HIGHEST 114 YEAR 79</div> <div>AVG. LOW 78 LOWEST 67 YEAR 87</div>	<div>9</div> <div>AVG. HIGH 104 HIGHEST 115 YEAR 79</div> <div>AVG. LOW 78 LOWEST 66 YEAR 61</div>	<div>10</div> <div>AVG. HIGH 103 HIGHEST 112 YEAR 79</div> <div>AVG. LOW 77 LOWEST 68 YEAR 72</div>	<div>11</div> <div>AVG. HIGH 102 HIGHEST 112 YEAR 63;71;79</div> <div>AVG. LOW 75 LOWEST 63 YEAR 85</div>	<div>12</div> <div>AVG. HIGH 101 HIGHEST 114 YEAR 71</div> <div>AVG. LOW 76 LOWEST 54 YEAR 85</div>	<div>13</div> <div>AVG. HIGH 102 HIGHEST 112 YEAR 71</div> <div>AVG. LOW 75 LOWEST 58 YEAR 85</div>	<div>14</div> <div>AVG. HIGH 101 HIGHEST 110 YEAR 83</div> <div>AVG. LOW 74 LOWEST 62 YEAR 85</div>	
<div>15</div> <div>AVG. HIGH 100 HIGHEST 107 YEAR 62;65;71;81</div> <div>AVG. LOW 73 LOWEST 63 YEAR 70</div>	<div>16</div> <div>AVG. HIGH 100 HIGHEST 109 YEAR 62</div> <div>AVG. LOW 72 LOWEST 62 YEAR 70;82</div>	<div>17</div> <div>AVG. HIGH 99 HIGHEST 113 YEAR 56</div> <div>AVG. LOW 72 LOWEST 64 YEAR 59;77</div>	<div>18</div> <div>AVG. HIGH 98 HIGHEST 113 YEAR 56</div> <div>AVG. LOW 72 LOWEST 54 YEAR 85</div>	<div>19</div> <div>AVG. HIGH 97 HIGHEST 111 YEAR 62</div> <div>AVG. LOW 71 LOWEST 57 YEAR 85</div>	<div>20</div> <div>AVG. HIGH 97 HIGHEST 107 YEAR 58</div> <div>AVG. LOW 69 LOWEST 55 YEAR 65</div>	<div>21</div> <div>AVG. HIGH 98 HIGHEST 109 YEAR 58</div> <div>AVG. LOW 70 LOWEST 59 YEAR 65</div>	
<div>22</div> <div>AVG. HIGH 97 HIGHEST 110 YEAR 66;82</div> <div>AVG. LOW 70 LOWEST 62 YEAR 65</div>	<div>23</div> <div>AVG. HIGH 97 HIGHEST 110 YEAR 66</div> <div>AVG. LOW 70 LOWEST 58 YEAR 60</div>	<div>24</div> <div>AVG. HIGH 97 HIGHEST 108 YEAR 79</div> <div>AVG. LOW 70 LOWEST 56 YEAR 86</div>	<div>25</div> <div>AVG. HIGH 98 HIGHEST 111 YEAR 63</div> <div>AVG. LOW 70 LOWEST 61 YEAR 86</div>	<div>26</div> <div>AVG. HIGH 98 HIGHEST 111 YEAR 56</div> <div>AVG. LOW 70 LOWEST 58 YEAR 86</div>	<div>27</div> <div>AVG. HIGH 97 HIGHEST 107 YEAR 60;63</div> <div>AVG. LOW 70 LOWEST 58 YEAR 86</div>	<div>28</div> <div>AVG. HIGH 97 HIGHEST 107 YEAR 69;80</div> <div>AVG. LOW 69 LOWEST 58 YEAR 82</div>	
<div>29</div> <div>AVG. HIGH 97 HIGHEST 110 YEAR 80</div> <div>AVG. LOW 69 LOWEST 60 YEAR 82</div>	<div>30</div> <div>AVG. HIGH 96 HIGHEST 108 YEAR 80</div> <div>AVG. LOW 68 LOWEST 57 YEAR 59;86</div>	<div>X</div>				<div>RAINFALL (IN INCHES) 0.44+ 2.63;76 1.95;17h'63- AVERAGE NO. OF DAYS PARTLY CLOUDY 5 AVERAGE SKY COVER 2/10</div>	<div>MONTHLY MAX 24 HR MAX CLEAR 24 CLOUDY 1</div>



# US ARMY YUMA PROVING GROUND, ARIZONA

1954-DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE -1987  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

OCTOBER

AVG. HIGH HIGHEST YEAR	96 111 80	AVG. HIGH HIGHEST YEAR	94 112 30	AVG. HIGH HIGHEST YEAR	94 105 79,80	AVG. HIGH HIGHEST YEAR	93 105 79,87	AVG. HIGH HIGHEST YEAR	94 106 80,87	AVG. HIGH HIGHEST YEAR	94 108 80	AVG. HIGH HIGHEST YEAR	94 106 78;80
1		2		3		4		5		6		7	
AVG. LOW LOWEST YEAR	68 56 82	AVG. LOW LOWEST YEAR	67 54 59	AVG. LOW LOWEST YEAR	67 56 59;82	AVG. LOW LOWEST YEAR	66 54 59	AVG. LOW LOWEST YEAR	66 53 59	AVG. LOW LOWEST YEAR	66 56 69	AVG. LOW LOWEST YEAR	66 58 57;82
AVG. HIGH HIGHEST YEAR	92 103 63	AVG. HIGH HIGHEST YEAR	92 102 65	AVG. HIGH HIGHEST YEAR	91 101 78	AVG. HIGH HIGHEST YEAR	91 104 65	AVG. HIGH HIGHEST YEAR	91 105 65	AVG. HIGH HIGHEST YEAR	92 104 78	AVG. HIGH HIGHEST YEAR	91 105 78
8		9		10		11		12		13		14	
AVG. LOW LOWEST YEAR	65 55 70	AVG. LOW LOWEST YEAR	64 47 61	AVG. LOW LOWEST YEAR	63 47 61	AVG. LOW LOWEST YEAR	63 50 73	AVG. LOW LOWEST YEAR	63 52 61	AVG. LOW LOWEST YEAR	61 49 69	AVG. LOW LOWEST YEAR	63 47 81
AVG. HIGH HIGHEST YEAR	89 104 58	AVG. HIGH HIGHEST YEAR	88 103 58	AVG. HIGH HIGHEST YEAR	89 103 59	AVG. HIGH HIGHEST YEAR	88 100 74	AVG. HIGH HIGHEST YEAR	88 99 73	AVG. HIGH HIGHEST YEAR	87 96 54;67;73	AVG. HIGH HIGHEST YEAR	87 96 54
15		16		17		18		19		20		21	
AVG. LOW LOWEST YEAR	62 49 81	AVG. LOW LOWEST YEAR	60 46 80	AVG. LOW LOWEST YEAR	60 44 80	AVG. LOW LOWEST YEAR	60 49 71	AVG. LOW LOWEST YEAR	60 47 71	AVG. LOW LOWEST YEAR	60 52 86	AVG. LOW LOWEST YEAR	59 52 69
AVG. HIGH HIGHEST YEAR	87 96 54;56	AVG. HIGH HIGHEST YEAR	87 101 59	AVG. HIGH HIGHEST YEAR	86 102 59	AVG. HIGH HIGHEST YEAR	87 99 59	AVG. HIGH HIGHEST YEAR	87 99 65	AVG. HIGH HIGHEST YEAR	86 99 65	AVG. HIGH HIGHEST YEAR	85 96 65
22		23		24		25		26		27		28	
AVG. LOW LOWEST YEAR	59 49 79	AVG. LOW LOWEST YEAR	59 51 84	AVG. LOW LOWEST YEAR	59 45 61	AVG. LOW LOWEST YEAR	57 44 75	AVG. LOW LOWEST YEAR	57 43 75	AVG. LOW LOWEST YEAR	58 50 75	AVG. LOW LOWEST YEAR	57 51 54;71
AVG. HIGH HIGHEST YEAR	82 96 65	AVG. HIGH HIGHEST YEAR	81 96 65	AVG. HIGH HIGHEST YEAR	81 95 65	AVG. HIGH HIGHEST YEAR	81 95 65	AVG. HIGH HIGHEST YEAR	81 95 65	AVG. HIGH HIGHEST YEAR	81 95 65	AVG. HIGH HIGHEST YEAR	81 95 65
29		30		31		RECORD TEMPERATURES (°F).		RAINFALL		SNOWFALL		(IN INCHES)	
AVG. LOW LOWEST YEAR	57 43 71	AVG. LOW LOWEST YEAR	55 38 71	AVG. LOW LOWEST YEAR	54 36 71	MAXIMUM 112:2nd, '80		0.35+		-		MONTHLY AVG	
						MINIMUM 36:31st, '71		3.78-'72		-		MONTHLY MAX	
						AVG MAX 89 AVG MIN 61		3.02-6th '72		-		24 HR MAX	
						AVG REL HUMIDITY (34) %		AVERAGE NO. OF DAYS CLEAR 23				CLOUDY 2	
						AVG WIND SPEED (KTS) 4		PARTLY CLOUDY 6				AVT-AGE : KY COVER 3/10	
						PREVAILING WIND DIR W							

# US ARMY YUMA PROVING GROUND, ARIZONA

1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1986  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

NOVEMBER

AVG. HIGH HIGHEST YEAR	82 94 62:66	1	AVG. HIGH HIGHEST YEAR	81 90 62	2	AVG. HIGH HIGHEST YEAR	83 94 62	3	AVG. HIGH HIGHEST YEAR	83 93 80	4	AVG. HIGH HIGHEST YEAR	83 95 80	5	AVG. HIGH HIGHEST YEAR	82 91 80	6	AVG. HIGH HIGHEST YEAR	81 91 80	7
AVG. LOW LOWEST YEAR	54 41 72	2	AVG. LOW LOWEST YEAR	53 42 56	3	AVG. LOW LOWEST YEAR	52 42 61	4	AVG. LOW LOWEST YEAR	53 40 56	5	AVG. LOW LOWEST YEAR	53 41 56	6	AVG. LOW LOWEST YEAR	53 44 56	7	AVG. LOW LOWEST YEAR	52 46 68:73	8
AVG. HIGH HIGHEST YEAR	81 91 80	8	AVG. HIGH HIGHEST YEAR	81 92 56	9	AVG. HIGH HIGHEST YEAR	80 90 73	10	AVG. HIGH HIGHEST YEAR	80 92 73	11	AVG. HIGH HIGHEST YEAR	78 93 73	12	AVG. HIGH HIGHEST YEAR	77 89 67	13	AVG. HIGH HIGHEST YEAR	75 88 67	14
AVG. LOW LOWEST YEAR	53 46 77	9	AVG. LOW LOWEST YEAR	52 43 55	10	AVG. LOW LOWEST YEAR	51 40 66	11	AVG. LOW LOWEST YEAR	51 40 82	12	AVG. LOW LOWEST YEAR	51 42 58	13	AVG. LOW LOWEST YEAR	51 40 85	14	AVG. LOW LOWEST YEAR	50 41 75	15
AVG. HIGH HIGHEST YEAR	74 88 81	15	AVG. HIGH HIGHEST YEAR	74 90 81	16	AVG. HIGH HIGHEST YEAR	73 84 67	17	AVG. HIGH HIGHEST YEAR	73 86 67	18	AVG. HIGH HIGHEST YEAR	73 83 66	19	AVG. HIGH HIGHEST YEAR	73 83 54	20	AVG. HIGH HIGHEST YEAR	73 84 54	21
AVG. LOW LOWEST YEAR	49 40 64:85	16	AVG. LOW LOWEST YEAR	49 35 64	17	AVG. LOW LOWEST YEAR	48 31 58	18	AVG. LOW LOWEST YEAR	48 35 58	19	AVG. LOW LOWEST YEAR	47 35 61:64	20	AVG. LOW LOWEST YEAR	46 33 56	21	AVG. LOW LOWEST YEAR	47 31 79	22
AVG. HIGH HIGHEST YEAR	72 85 54	22	AVG. HIGH HIGHEST YEAR	73 86 54	23	AVG. HIGH HIGHEST YEAR	75 86 54:59	24	AVG. HIGH HIGHEST YEAR	74 86 54:77	25	AVG. HIGH HIGHEST YEAR	73 88 77	26	AVG. HIGH HIGHEST YEAR	72 85 54	27	AVG. HIGH HIGHEST YEAR	71 85 54	28
AVG. LOW LOWEST YEAR	47 40 64	23	AVG. LOW LOWEST YEAR	47 39 55:61:83	24	AVG. LOW LOWEST YEAR	46 36 55	25	AVG. LOW LOWEST YEAR	48 38 66	26	AVG. LOW LOWEST YEAR	47 37 81:84	27	AVG. LOW LOWEST YEAR	46 35 73	28	AVG. LOW LOWEST YEAR	46 37 84	29
AVG. HIGH HIGHEST YEAR	71 82 66	29	AVG. HIGH HIGHEST YEAR	71 80 66	30	AVG. HIGH HIGHEST YEAR	71 80 66	31	AVG. HIGH HIGHEST YEAR	71 80 66	32	AVG. HIGH HIGHEST YEAR	71 80 66	33	AVG. HIGH HIGHEST YEAR	71 80 66	34	AVG. HIGH HIGHEST YEAR	71 80 66	35
AVG. LOW LOWEST YEAR	46 31 76	30	AVG. LOW LOWEST YEAR	46 36 76	31	AVG. LOW LOWEST YEAR	46 36 76	32	AVG. LOW LOWEST YEAR	46 36 76	33	AVG. LOW LOWEST YEAR	46 36 76	34	AVG. LOW LOWEST YEAR	46 36 76	35	AVG. LOW LOWEST YEAR	46 36 76	36

RECORD TEMPERATURES (°F).  
MAXIMUM 95:5th, '80  
MINIMUM 31: (\*) See below  
AVG MAX 76 AVG MIN 49  
AVG REL HUMIDITY (37)%  
AVG WIND SPEED (KTS) 4  
PREVAILING WIND DIR NNM  
RAINFALL SNOWFALL (IN INCHES)  
0.29+ - -  
MONTHLY MAX  
MONTHLY MAX  
24 HR MAX  
AVERAGE NO. OF DAYS CLEAR 20  
PARTLY CLOUDY 7  
CLOUDY 3  
AVERAGE SKY COVER 3/10

(\*) 17th:58; 21st:79:29th:76

# US ARMY YUMA PROVING GROUND, ARIZONA

1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1986  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

DECEMBER

AVG. HIGH HIGHEST YEAR	71 81 66	AVG. HIGH HIGHEST YEAR	71 83 59	AVG. HIGH HIGHEST YEAR	71 84 58	AVG. HIGH HIGHEST YEAR	70 82 58	AVG. HIGH HIGHEST YEAR	70 81 79	AVG. HIGH HIGHEST YEAR	70 82 66	AVG. HIGH HIGHEST YEAR	70 80 79
1		2		3		4		5		6		7	
AVG. LOW LOWEST YEAR	45 38 72	AVG. LOW LOWEST YEAR	46 37 74	AVG. LOW LOWEST YEAR	45 37 76	AVG. LOW LOWEST YEAR	45 37 60	AVG. LOW LOWEST YEAR	46 36 68	AVG. LOW LOWEST YEAR	44 34 72	AVG. LOW LOWEST YEAR	44 33 78
AVG. HIGH HIGHEST YEAR	68 80 62;75;77	AVG. HIGH HIGHEST YEAR	68 82 62;75	AVG. HIGH HIGHEST YEAR	68 80 62	AVG. HIGH HIGHEST YEAR	68 80 58;62	AVG. HIGH HIGHEST YEAR	67 82 58	AVG. HIGH HIGHEST YEAR	67 79 58	AVG. HIGH HIGHEST YEAR	67 79 58
8		9		10		11		12		13		14	
AVG. LOW LOWEST YEAR	43 28 78	AVG. LOW LOWEST YEAR	44 30 76	AVG. LOW LOWEST YEAR	44 31 60	AVG. LOW LOWEST YEAR	43 31 74	AVG. LOW LOWEST YEAR	42 28 72	AVG. LOW LOWEST YEAR	41 32 85	AVG. LOW LOWEST YEAR	42 31 63
AVG. HIGH HIGHEST YEAR	68 80 77	AVG. HIGH HIGHEST YEAR	69 82 80	AVG. HIGH HIGHEST YEAR	68 80 79	AVG. HIGH HIGHEST YEAR	68 80 80	AVG. HIGH HIGHEST YEAR	69 78 80	AVG. HIGH HIGHEST YEAR	69 79 80	AVG. HIGH HIGHEST YEAR	67 78 55
15		16		17		18		19		20		21	
AVG. LOW LOWEST YEAR	41 30 63;64	AVG. LOW LOWEST YEAR	42 32 64;71	AVG. LOW LOWEST YEAR	42 33 75	AVG. LOW LOWEST YEAR	43 34 68	AVG. LOW LOWEST YEAR	42 33 68	AVG. LOW LOWEST YEAR	43 35 68;71	AVG. LOW LOWEST YEAR	42 29 68
AVG. HIGH HIGHEST YEAR	68 78 80	AVG. HIGH HIGHEST YEAR	67 80 55	AVG. HIGH HIGHEST YEAR	68 81 64	AVG. HIGH HIGHEST YEAR	67 77 64;80	AVG. HIGH HIGHEST YEAR	66 81 80	AVG. HIGH HIGHEST YEAR	66 81 80	AVG. HIGH HIGHEST YEAR	66 81 80
22		23		24		25		26		27		28	
AVG. LOW LOWEST YEAR	44 26 68	AVG. LOW LOWEST YEAR	43 32 68	AVG. LOW LOWEST YEAR	42 30 76	AVG. LOW LOWEST YEAR	43 31 63	AVG. LOW LOWEST YEAR	42 32 54	AVG. LOW LOWEST YEAR	41 30 76	AVG. LOW LOWEST YEAR	42 30 74
AVG. HIGH HIGHEST YEAR	65 84 80	AVG. HIGH HIGHEST YEAR	65 83 80	AVG. HIGH HIGHEST YEAR	64 78 80	AVG. HIGH HIGHEST YEAR	64 77 80	AVG. HIGH HIGHEST YEAR	66 81 80	AVG. HIGH HIGHEST YEAR	66 81 80	AVG. HIGH HIGHEST YEAR	66 81 80
29		30		31		32		33		34		35	
AVG. LOW LOWEST YEAR	41 26 54	AVG. LOW LOWEST YEAR	41 33 68	AVG. LOW LOWEST YEAR	40 29 72	AVG. LOW LOWEST YEAR	40 29 72	AVG. LOW LOWEST YEAR	40 29 72	AVG. LOW LOWEST YEAR	40 29 72	AVG. LOW LOWEST YEAR	40 29 72

RAINFALL (IN INCHES)	0.40+	MONTHLY AVG	2.11'65	MONTHLY MAX	0.90;15th'61	24 HR MAX	AVERAGE NO. OF DAYS	CLEAR 18	PARTLY CLOUDY	8	CLOUDY	5	AVERAGE SKY COVER	4/10
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RECORD TEMPERATURES (°F).	MAXIMUM 84:3rd'58;29th'80	MINIMUM 26:29th'54;22nd'68	AVG MAX 68	AVG MIN 43	AVG REL HUMIDITY (43) 5	AVG WIND SPEED (KTS) 4	PREVAILING WIND DIR NNW
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